

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

*** SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name: NEOFロン ETFE EPW-1609BK****1.2 Relevant identified uses of the substance or mixture and uses advised against:****Sector of Use SU8** Manufacture of bulk, large scale chemicals (including petroleum products)**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

DAIKIN INDUSTRIES, LTD. CHEMICALS DIVISION:

OSAKA UMEDA TWIN TOWERS SOUTH, 1-13-1 Umeda, Kita-ku, Osaka-shi, Osaka, 530-0001, Japan

Phone: +81-6-6147-9702 Fax: +81-6-6147-9807

Further information obtainable from:<http://www.daikin.com/>sales@daikinchem.de**1.4 Emergency telephone number:**

Japan: +81-6-6349-7521

China: +86-532-8388-9090, +86-21-34151689

South Korea: +82-2-568-1722

Americas: CHEMTREC +1-800-424-9300 (Outside US/Canada: +1-703-527-3887)

Europe: +49-211-179 225-0

*** SECTION 2: Hazard identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Repr. 1B H360D May damage the unborn child.



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008:**

The product is classified and labelled according to the CLP regulation.

Signal word: Danger**Hazard-determining components of labelling:**

N-Methyl-2-pyrrolidone

Precautionary statements:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

Restricted to professional users.

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

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SECTION 3: Composition/information on ingredients**Information on ingredients:**

ETFE copolymer	25-35%
Polyoxyethene glycol alkyl ether	<5%
Eye Dam. 1, H318 Acute Tox. 4, H302	
Binder	5-15%
CAS: 1333-86-4 Carbon black	< 5%
CAS: 872-50-4 N-Methyl-2-pyrrolidone	15-25%
Repr. 1B, H360D Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335 Specific concentration limit: STOT SE 3; H335: C ≥ 10 %	
CAS: 7732-18-5 Water	35-45%
Others	<5%

SVHC:

CAS: 872-50-4 N-Methyl-2-pyrrolidone

Additional information: For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****4.1 Description of first aid measures****General information:** Seek medical treatment.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:**

Remove contaminated clothes immediately.

Immediately wash with water and soap and rinse thoroughly.

Consult a doctor in case of complaints.

After eye contact:

Immediately rinse with a lot of water for several minutes. Remove contact lenses if possible. Continue rinsing.

Consult an ophthalmologist in case of complaints.

After swallowing:

Rinse mouth with water. Do not induce vomiting.

Consult a doctor in case of complaints.

4.2 Most important symptoms and effects, both acute and chronic: No further relevant information available.**4.3 Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:** Use fire extinguishing methods suitable for surrounding conditions.**For safety reasons unsuitable extinguishing agents:** No further information available.**5.2 Special hazards arising from the substance or mixture:**

Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters:**Protective equipment:**

Wear fully protective suit.

Wear self-contained breathing apparatus and protective suit.

Do not inhale explosion gases or combustion gases.

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

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SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures:**

Ensure adequate ventilation before entering the area.

Keep out unauthorized persons.

Wear appropriate protective devices (See Section 8 Exposure Controls/Personal Protection).

Avoid contact with eyes and skin.

Do not swallow the product.

6.2 Environmental precautions: Prevent seepage into sewage system, workpits and cellars.

6.3 Methods and material for containment and cleaning up:

For a small amount of leakage: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders) or collect in an empty container that can be sealed tightly.

For a large amount of leakage: Enclose with banks to avoid outflow. Lead the leakage to a safe place and collect.

6.4 Reference to other sections:

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Do not handle until all safety precautions have been read and understood.

Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities:**Storage****Requirements to be met by storerooms and receptacles:**

Store in a cool and dry location.

Provide solvent resistant, sealed floor.

Prevent any seepage into the ground.

Keep containers tightly sealed.

Information about storage in one common storage facility:

See section 10 for information on incompatible materials.

Further information about storage conditions:

Protect from heat and direct sunlight.

Store containers in a well ventilated area.

Store locked up.

7.3 Specific end use(s): No further relevant information available.

*** SECTION 8: Exposure controls/personal protection**

8.1 Control parameters No further information available.

Ingredients with limit values that require monitoring at the workplace:

CAS: 872-50-4 N-Methyl-2-pyrrolidone

IOELV (EU) Short-term value: 80 mg/m³, 20 ppm

Long-term value: 40 mg/m³, 10 ppm

Skin

DNELs:

CAS: 872-50-4 N-Methyl-2-pyrrolidone

Oral DNEL - consumer 0.85 mg/kg bw/d (long-term exposure) (systemic effects)

Dermal DNEL - worker 4.8 mg/kg bw/d (long-term exposure) (systemic effects)

DNEL - consumer 2.4 mg/kg bw/d (long-term exposure) (systemic effects)

Inhalative DNEL - worker 40 mg/m³ (long-term exposure) (local effects)

14.4 mg/m³ (long-term exposure) (systemic effects)

DNEL - consumer 3.6 mg/m³ (long-term exposure) (systemic effects)

4.5 mg/m³ (long-term exposure) (local effects)

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

Trade name: **NEOFLON ETFE EPW-1609BK****PNECs:****CAS: 872-50-4 N-Methyl-2-pyrrolidone**

PNEC 0.25 mg/l (fresh water)

0.025 mg/l (marine water)

10 mg/l (sewage treatment plant)

PNEC 1.09 mg/kg dw (fresh water sediment)

0.109 mg/kg dw (marine water sediment)

0.07 mg/kg dw (soil)

Additional information: The lists valid during the making were used as basis.**8.2 Exposure controls****Appropriate engineering controls** No further data; see item 7.**Individual protection measures, such as personal protective equipment****General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

Do not eat or drink while working.

Keep away from tobacco products.

Respiratory protection:

Use respiratory protective device with filters for organic and acid gas (or airline respirators in some cases) if formation of toxic gases is possible while the product is heated.

Use respiratory protective device with organic gas cartridge.

Hand protection

Protective gloves

Material of gloves: Rubber**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/face protection

Safety glasses

Body protection: Protective work clothing*** SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Physical state**

Fluid

Colour:

Black

Odour:

Weak, characteristic

Odour threshold:

Not determined.

Melting point/freezing point:

Undetermined.

Boiling point or initial boiling point and boiling range

Undetermined.

Flammability

Not applicable.

Lower and upper explosion limit**Lower explosive limit:**

No further information available.

Upper explosive limit:

Not determined.

Flash point:

Not applicable.

Decomposition temperature:

No further information available.

Not determined.

pH

5.5-8.0

Viscosity:**Kinematic viscosity**

Not determined.

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

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Dynamic:	Not determined.
Solubility	
water:	Fully miscible.
Partition coefficient n-octanol/water (log value)	No further information available. Not determined.
Vapour pressure:	No further information available.
Density and/or relative density	
Density at 25 °C:	0.9-1.3 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Particle characteristics	Not applicable.
9.2 Other information:	
Form:	Liquid
Auto-ignition temperature:	Product is not self-igniting.
Explosive properties:	Product does not present an explosion hazard.
Evaporation rate	Not determined.
Information with regard to physical hazard classes	
Explosives	Not applicable Not applicable
Flammable gases	Not applicable Not applicable Not applicable
Aerosols	Not applicable Not applicable
Oxidising gases	Not applicable Not applicable
Gases under pressure	Not applicable Not applicable
Flammable liquids	Not applicable Not applicable
Flammable solids	Not applicable Not applicable
Self-reactive substances and mixtures	Not applicable Not applicable
Pyrophoric liquids	Not applicable Not applicable
Pyrophoric solids	Not applicable Not applicable
Self-heating substances and mixtures	Not applicable Not applicable
Substances and mixtures, which emit flammable gases in contact with water	Not applicable Not applicable
Oxidising liquids	Not applicable Not applicable
Oxidising solids	Not applicable Not applicable
Organic peroxides	Not applicable Not applicable
Corrosive to metals	Not applicable Not applicable
Desensitised explosives	Not applicable Not applicable

SECTION 10: Stability and reactivity**10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

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10.3 Possibility of hazardous reactions: No dangerous reactions known under normal conditions of use.

10.4 Conditions to avoid: Keep away from heat, sparks, flame, high temperature.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products:

As for decomposition products, particulate matters and extremely toxic/corrosive fumes may be generated (HF, carbonyl fluoride, monomers, perfluoroisobutylene).

Decomposition products differ depending on the temperature and conditions.

* SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

CAS: 872-50-4 N-Methyl-2-pyrrolidone

Oral LD50 4150 mg/kg (Rat) (OECD 401)

Data from CSR.

3914 mg/kg (Rat)

Dermal LD50 > 5000 mg/kg (Rat) (OECD 402)

Data from CSR.

8000 mg/kg (Rabbit)

Inhalative LC50 > 5100 mg/m³ (Rat) (OECD 403)

Data from CSR.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation Causes serious eye irritation.

Respiratory or skin sensitisation No further information available.

Reproductive toxicity May damage the unborn child.

STOT-single exposure May cause respiratory irritation.

STOT-repeated exposure No further information available.

Other information (about experimental toxicology): No further information available.

Subacute to chronic toxicity No further information available.

Additional toxicological information:

General effects:

Fumes generated during burning may cause "polymer fume fever" (flu-like symptoms such as fever, chill, cough).

This may last for a whole day and night.

Fumes are not absorbed in skin. No sensitizing effect known.

Effects of hydrogen fluoride:

Low concentration of hydrogen fluoride may cause feeling of dyspnea, cough, irritation in eyes, nose, throat, fever, chill for 1-2 days.

After that, dyspnea, cyanosis and pulmonary edema may be seen.

High concentration of hydrogen fluoride damages liver and kidney.

Effects of carbonyl fluoride:

Skin: Irritation or eruption

Eye: Ulcer in cornea, conjunctiva

Respiratory system: Irritation

Lung: Temporary symptoms such as cough, pain, dyspnea

Persons who have experienced lung diseases are vulnerable to toxicity caused by excessive exposure to pyrolysis products

11.2 Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

* SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

Printing date 15.03.2023

Version number 1

Revision: 15.03.2023

Trade name: **NEOFLON ETFE EPW-1609BK****12.2 Persistence and degradability:** No further relevant information available.**12.3 Bioaccumulative potential:** No further relevant information available.**12.4 Mobility in soil:** No further relevant information available.**12.5 Results of PBT and vPvB assessment****PBT:** No further relevant information available.**vPvB:** No further information available.**12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.**12.7 Other adverse effects:****Ecotoxicological effects:** no data**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation:** Disposal must be made according to official regulations.**Uncleaned packaging****Recommendation:** Disposal must be made according to official regulations.*** SECTION 14: Transport information****14.1 UN number or ID number**

Not applicable

14.2 UN proper shipping name:

Not applicable

14.3 Transport hazard class(es):

Not applicable

14.4 Packing group:

Not applicable

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user:

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Transport/Additional information:

Avoid direct sunlight. Make sure of no damage, corrosion, leaks on the receptacles.

Take necessary measures for preventing cargo shift.

UN "Model Regulation":

Not applicable

*** SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

No further relevant information available.

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS07 GHS08

Signal word Danger**Hazard-determining components of labelling:**

N-Methyl-2-pyrrolidone

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H360D May damage the unborn child.

H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Regulation (EU) No 649/2012Poly(oxyethylene) nonylphenyl ether: Annex I Part 1
Annex I Part 2**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

National regulations No further information available.**Other regulations, limitations and prohibitive regulations:****Substances of very high concern (SVHC) according to REACH, Article 57:**

CAS: 872-50-4 N-Methyl-2-pyrrolidone

Poly(oxyethylene) nonylphenyl ether

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.*** SECTION 16: Other information**

The product is for the industrial use only. We do not guarantee the safety in case the product is used for the other purposes. When using the product for health-care application or food/feed application, consult us in advance. This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: EHS Department**Contact:**

sales@daikinchem.de

www.daikinchem.de

http://www.daikin.com/

Abbreviations and acronyms:

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Repr. 1B: Reproductive toxicity – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

*** Data compared to the previous version altered.**