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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name:
NAEWOIKOREA., LTD.

Product name:
NWK-99 OPP

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

Identified uses: specialised formulation for the professional and industrial cleaning and degreasing of electrical, electrotechnical, electronic, electromechanical and power electronic equipment, installations, apparatus, subassemblies and components, including automation, control, measurement and telecommunications equipment. Designed to remove operational dirt, in particular oils, greases, greasy deposits, dust and other contaminants that can be removed using a solvent-based product. The product is intended exclusively for professional and industrial use.

Uses advised against: uses other than those identified above. Do not use the product to clean computers or mobile phones.

1.3. Details of the supplier of the safety data sheet

Supplier:
NAEWOIKOREA., LTD.

Address: 501 W-City 9-22, 255 Pankyoro Bundanggu
Seongnam-Si Gyeonggi-Do, Korea 13486

Phone: +82 31 734 0350

E-mail address: nwko@naewoikorea.site

1.4. Emergency telephone number

112 (general emergency number), 998 (fire brigade), 999 (emergency medical service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] as amended

Asp. Tox. 1 (Aspiration toxicity, Category 1) H304

Full text of H- and EUH-statements can be found in section 16

Most significant adverse effects related to physicochemical properties

The product is not classified on the basis of hazards associated with its physical properties.

Most significant adverse effects to human health

May be fatal if swallowed and enters airways.

Most significant adverse effects to environment

The product is not classified on the basis of its environmental effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]



DANGER

Substances that should be listed in the product identifier:
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics.
Hazard statements:
H304: May be fatal if swallowed and enters airways.

Precautionary statements:

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

P301+P310+P331: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

P405: Store locked up.

P501: Dispose of contents/container through a certified company for disposal in accordance with local/national/international regulations.

Supplemental label information:

Ingredients according to detergent regulation: aliphatic hydrocarbons (≥ 30%), aromatic hydrocarbons (< 5%), perfumes.

2.3. Other hazards

Does not contain PBT and/or vPvB substances ≥ 0.1% assessed according to REACH Annex XIII. The mixture does not meet the PBT and vPvB criteria according to Annex XIII of REACH. As of the date of preparation of the safety data sheet, the product does not contain substances included in the Candidate List for inclusion in Annex XIV of REACH, established in accordance with Article 59(1) of Regulation (EC) No. 1907/2006 due to endocrine disrupting properties. No substance in the product has been identified as having endocrine disrupting properties according to the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance name	Substance identifier	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concentration [% w/w]	Specific concentration limit [%]
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics[1]	CAS: - EC: 920-901-0 INDEX number: - REACH Nr: 01-2119456810-40-XXXX	Asp. Tox. 1 H304	< 100	Not applicable.
Isopentyl acetate[1]	CAS: 123-92-2 EC: 204-662-3 INDEX number: 607-130-00-2 REACH Nr: -	Flam. Liq. 3, H226 EUH066	< 0.1	Not applicable.

1 – substance with an occupational exposure limit value at the national level.

Full text of H- and EUH-statements can be found in section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Skin contact: remove contaminated clothing. Rinse contaminated skin with plenty of soap and water. If alarming symptoms occur, contact a doctor.

Eye contact: protect the unaffected eye and remove contact lenses. Rinse contaminated eyes thoroughly with water or saline solution (e.g. 0.9% sodium chloride or 5% glucose) for several minutes. Avoid strong water jets - risk of corneal damage. If alarming symptoms occur, contact a doctor.

Ingestion: do not induce vomiting! Risk of aspiration of the product into the lungs! Rinse the mouth of the affected person, if conscious, with water. Never put anything into the mouth of an unconscious person. Immediately consult a doctor, show packaging or label.

Inhalation: Move the affected person to fresh air, keep warm and calm, and allow to breathe freely. If alarming symptoms occur, contact a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: redness; with prolonged or repeated exposure it may cause skin dryness and defatting.

Eye contact: redness, lacrimation, temporary blurred vision.

Ingestion: abdominal pain, vomiting, diarrhoea, irritation of the gastrointestinal tract may occur, in case of vomiting there is a risk of aspiration of the product into the lungs and the development of chemical pneumonia, in extreme cases death is possible.

Inhalation: under normal working conditions and handling practices, no adverse effects from exposure via this route are expected. In the event of exposure to high concentrations of the product's vapors, fatigue and headaches may occur.

4.3. Indication of any immediate medical attention and special treatment needed

Symptomatic treatment should be implemented. The decision on emergency treatment is made by a doctor or paramedic after a thorough assessment of the condition of the victim.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: extinguishing procedures should be adapted to the fire environment. Sprayed water, extinguishing foam, extinguishing powder, carbon dioxide.

Unsuitable extinguishing media: avoid strong jets of water to prevent the spread of fire.

5.2. Special hazards arising from the substance or mixture

During combustion, hazardous and toxic gases such as carbon oxides, low molar weight hydrocarbons and other unidentified products of thermal decomposition and combustion may be produced. Substances released during a fire may pose a health hazard; avoid inhalation. Vapours may form explosive mixtures with air. High temperatures may lead to pressure increase within containers holding the product, which may cause ruptures and release the product.

5.3. Advice for firefighters

Use full protective equipment, including breathing apparatus with a face shield (EN 137), protective footwear (EN 659), helmets (EN 443) and protective clothing (EN 469). Do not undertake any firefighting activities without appropriate preparation and training. Fight the fire from a safe distance. Cool containers exposed to fire with water spray from a safe distance. Avoid the release of used extinguishing media into the environment, sewers and water bodies. Collect used extinguishing media.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriately selected personal protective equipment. Avoid contamination of skin and eyes. Avoid inhalation of product vapours. Ensure adequate ventilation of the rooms being cleaned. Only trained and appropriately equipped personnel should deal with the incident. Restrict access by unauthorised persons to the area where the product has been released during the clean-up operation. Do not walk on spilled material. In the event of a major release, the area may be at risk of fire; isolate the affected area and evacuate personnel not involved in dealing with the incident. Strictly avoid open flames. Use non-sparking tools. Eliminate sources of ignition.

6.2. Environmental precautions

Prevent release of the product into the environment, soil, wastewater, groundwater and surface water. Do not allow the product to enter drains. In the event of a major release to the environment, notify the appropriate services without fail.

6.3. Methods and material for containment and cleaning up

In the event of small spills, soak up the spill with paper towel and clean the surface with water. For large spills, collect the spilled material using a non-flammable, liquid-absorbent material (e.g. sand, diatomaceous earth) and place it in labelled containers intended for waste disposal. During the clean-up operation, avoid generating vapors of the product. Clean and ventilate the contaminated area thoroughly. Wear appropriate personal protective equipment during clean-up operations. In the event of major releases, contain the spill and pump it out. Treat the collected material as waste and transfer it to a suitable waste container. Rinse the cleaned surface with copious amounts of water and detergent.

6.4. Reference to other sections

Handling of product waste - section 13 of the safety data sheet.
Personal protective equipment - section 8 of the safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Smoking and the use of e-cigarettes are prohibited. Do not eat or drink whilst working with the product. Comply with health and safety regulations. Use personal protective equipment. Avoid vapours inhalation. Avoid contact with eyes and skin. Do not allow the product to come into contact with the mouth. Always wash your hands thoroughly after each contact with the product, upon finishing work with the product, and before taking a break. Remove contaminated clothing to avoid contact with skin. Contaminated clothing must not be taken outside the workplace. Ensure adequate ventilation at workstations. Unused containers containing the product should be stored tightly sealed. Use non-sparking tools, eliminate sources of ignition, and take measures to prevent electrostatic discharges.

7.2. Conditions for safe storage, including any incompatibilities

Store in the original, tightly closed containers in a cool, dry and well-ventilated place. Avoid contact with food and animal feed. Protect from sunlight, open flames and heat sources. Do not store with incompatible materials. Protect from moisture.

7.3. Specific end use(s)

Specialised cleaning and maintenance medium with high dielectric resistance.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics (EC 920-901-0)	
Poland - Occupational exposure limits	
Chemical substance name	Highly refined mineral oils, excluding metalworking fluids
NDS	5 mg/m³ - inhalable fraction
Legal basis	Journal of Laws 2026, item 447, as amended

Isopentyl acetate (CAS 123-92-2)	
Poland - Occupational exposure limits	
Chemical substance name	Isopentyl acetate
NDS	250 mg/m³
NDSCh	500 mg/m³
Legal basis	Journal of Laws 2026, item 447, as amended

Monitor concentrations of hazardous substances in the air and control air cleanliness at the workplace where possible and justified. Measurement procedures should comply with the relevant national or European standards, taking account of workplace conditions and the appropriate measurement methodology. The mode, type and frequency of testing must meet the requirements laid down in the relevant Regulation of the Minister of Health.

8.2. Exposure controls

Appropriate engineering controls:
Work in accordance with health and safety rules. Do not eat, drink or smoke during work, do not use electronic cigarettes. Ensure adequate general ventilation of rooms where work with the product is carried out. Ensure that exposure to substances is kept below the maximum allowable workplace concentrations.
Personal protection equipment:
Use recommended personal protective equipment. Personal protective equipment should be selected in accordance with CEN standards and in consultation with the supplier of protective equipment. When selecting personal protective equipment, consider the type of task being performed and the duration of exposure.
Eye protection:
Although the risk assessment does not indicate any hazard, if there is a possibility of liquid splashes, wear chemical-resistant goggles or safety glasses. ISO 16321-1
Skin protection:
Ensure skin protection is appropriate for the conditions of use and exposure. Wear protective clothing resistant to organic oils.

Hand protection:
In the event of prolonged exposure, wear protective gloves resistant to the product (in accordance with European standard ISO 374-1 or equivalent). Follow the glove manufacturer's instructions on permeability and penetration time. Select the material type and thickness at the workplace, as glove selection may also depend on other substances and exposure factors at the workplace.
For prolonged contact, use protective gloves with performance level 6 (breakthrough time > 480 min.). Recommended material: nitrile rubber, thickness > 0.4 mm (or greater, depending on data provided by the glove supplier). Select the exact material type and thickness according to the glove supplier's information.
When selecting gloves for a specific application and duration of use at the workplace, also consider other workplace factors, including, but not limited to, other chemicals that may be used, physical requirements (protection against cutting/drilling, thermal protection) and the glove supplier's instructions/specifications.
Respiratory protection:
Not required under normal working conditions. In the event of insufficient ventilation, or where indicated by a risk assessment, wear appropriate breathing apparatus.
Environmental exposure controls:
Avoid release to the environment. Prevent entry into drains, groundwater and surface water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless
Odour	: Characteristic
Odour threshold	: Not determined
Melting point	: Not determined
Freezing point	: Not determined
Boiling point	: 181-211°C (ASTM D1078-11 (2026))
Flammability	: Not determined
Lower explosion limit	: Not determined
Upper explosion limit	: Not determined
Flash point	: 66.0°C ± 1.0°C (Pensky-Martens closed cup method, EN ISO 2719)
Auto-ignition temperature	: Not determined
Decomposition temperature	: Not determined
pH	: 5.7-6.3 (PN-EN ISO 10390:2022-09)
Kinematic viscosity	: 2.216 mm²/s (20°C); 1.567 mm²/s (40°C)
Solubility	: Insoluble in water
Partition coefficient n-octanol/water (Log Kow)	: Not determined
Vapour pressure	: Not determined
Vapour pressure at 50°C	: Not determined
Density	: 765.1 kg/m³ (15°C)
Relative density	: Not determined
Relative vapour density at 20°C	: Not determined
Particle characteristics	: Not applicable - liquid

9.2. Other information

Dielectric strength: 35 kV
Power factor (60 Hz): 0.000065
Permittivity (ε): 2.01
Resistivity: 21760 gigaohm·m

SECTION 10: Stability and reactivity

10.1. Reactivity

Under normal working and use conditions, the product is not reactive.

10.2. Chemical stability

Under normal ambient conditions during storage and use, the product is stable.

10.3. Possibility of hazardous reactions

No hazardous polymerisation occurs. Under normal conditions, no hazardous reactions are expected. Vapours may form an explosive mixture with air.

10.4. Conditions to avoid

Keep away from sources of heat, hot surfaces and direct sunlight. Do not heat. Protect from moisture.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidising agents, strong reducing agents.

10.6. Hazardous decomposition products

Carbon oxides, low-molecular-weight hydrocarbons.

SECTION 11: Toxicological information

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

Substance	Exposure route	LD_{50} / LC_{50} / ATE	Value
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics (EC 920-901-0)	Oral	LD_{50}	> 5000 mg/kg (rat, OECD 401)
	Dermal	LD_{50}	> 5000 mg/kg (rabbit, OECD 402)
	Inhalation	LC_{50}	> 5 mg/l (rat, OECD 403)
Isopentyl acetate (CAS 123-92-2)	Oral	LD_{50}	7400 mg/kg (rabbit)
	Inhalation	LC_{50}	11600 mg/l (cat)

Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.

STOT-single exposure	Based on available data, the classification criteria are not met.
STOT-repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	May be fatal if swallowed and enters airways.
Information on likely routes of exposure	Skin contact: redness; with prolonged or repeated exposure it may cause skin dryness and defatting. Eye contact: redness, lacrimation, temporary blurred vision. Ingestion: abdominal pain, vomiting, diarrhoea, irritation of the gastrointestinal tract may occur, in case of vomiting there is a risk of aspiration of the product into the lungs and the development of chemical pneumonia, in extreme cases death is possible. Inhalation: under normal working conditions and handling practices, no adverse effects from exposure via this route are expected. In the event of exposure to high concentrations of the product's vapours, fatigue and headaches may occur.
Symptoms related to the physical, chemical and toxicological characteristics	No test data are available for the mixture. No additional information has been collected based on actual exposure to the product.
Delayed, immediate and chronic effects from short- and long-term exposure	No test data are available for the mixture. No additional information has been collected based on actual exposure to the product.

11.2. Information on other hazards

Endocrine disrupting properties

As of the date of preparation of the safety data sheet, the product does not contain substances included in the Candidate List for inclusion in Annex XIV of REACH, established in accordance with Article 59(1) of Regulation (EC) No. 1907/2006 due to endocrine disrupting properties. No substance in the product has been identified as having endocrine disrupting properties according to the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

Other information

No additional data available.

SECTION 12: Ecological information

12.1. Toxicity

Substance	Organism	Effect	Value/ Method
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics (EC 920-901-0)	*Oncorhynchus mykiss*	LC_{50}	1000 mg/l/96h
	Daphnia magna	EL_{0}	1000 mg/l/48h

Mixture toxicity:	Product is not classified as hazardous to aquatic environment.

12.2. Persistence and degradability

No additional data available for the mixture.

Substance	Biodegradability
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics (EC 920-901-0)	31.3% (28 days)

12.3. Bioaccumulative potential

No additional data available for the mixture.

12.4. Mobility in soil

No additional data available for the mixture.

12.5. Results of PBT and vPvB assessment

Does not contain PBT and/or vPvB substances ≥ 0.1% evaluated according to REACH Annex XIII.
The mixture does not meet the PBT and vPvB criteria according to Annex XIII of REACH.

12.6. Endocrine disrupting properties

As of the date of preparation of the safety data sheet, the product does not contain substances included in the Candidate List for inclusion in Annex XIV of REACH, established in accordance with Article 59(1) of Regulation (EC) No. 1907/2006 due to endocrine disrupting properties. No substance in the product has been identified as having endocrine disrupting properties according to the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

12.7. Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recommendations for product disposal
Disposal must be carried out using an appropriate EWC code in accordance with applicable regulations. Assign the waste code at the place of generation based on the application in which the mixture is used.
Recommendations for packaging disposal
Recover and recycle packaging waste safely in accordance with local/national regulations. Only completely emptied packaging may be sent for recycling.
Information on environmental waste
Avoid release to the environment.
National legislation: Act of 14 December 2012 on waste (Journal of Laws 2013, item 21, as amended) and Act of 13 June 2013 on packaging and packaging waste management (Journal of Laws 2013, item 888, as amended).
EU legislation: Directive 2008/98/EC, as amended; Directive 94/62/EC, as amended.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

Not applicable; the product is not classified as dangerous for transport.

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.

SECTION 15: Regulatory information

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

European Union legislation

REACH Annex XVII
The product does not contain substances listed in Annex XVII to REACH.

REACH Annex XIV
The product does not contain substances listed in Annex XIV to REACH.

REACH Candidate List (SVHC)
The product does not contain substances listed on the REACH Candidate List (SVHC).

PIC Regulation (EU 649/2012, Prior Informed Consent)
The product does not contain substances listed on the PIC list (Regulation (EU) No. 649/2012 concerning the export and import of hazardous chemicals).

POP Regulation (EU 2019/1021, Persistent Organic Pollutants)
The product does not contain substances listed on the POP list (Regulation (EU) 2019/1021 on persistent organic pollutants).

Ozone Depletion Regulation (EU 2024/590)
Does not contain substances listed on the ozone depletion list (Regulation (EU) 2024/590 on substances that deplete the ozone layer).

National legislation - Poland

Act of 25 February 2011 on chemical substances and their mixtures (Journal of Laws 2011, No. 63, item 322, as amended).
Act of 14 December 2012 on waste (Journal of Laws 2013, item 21, as amended).
Act of 13 June 2013 on packaging and packaging waste management (Journal of Laws 2013, item 888, as amended).
Regulation of the Minister of Climate of 2 January 2020 on the catalogue of waste (Journal of Laws 2020, item 10).
Act of 19 August 2011 on the transport of dangerous goods (Journal of Laws 2011, No. 227, item 1367, as amended).
Regulation of the Minister of Family, Labour and Social Policy of 26 March 2026 amending the Regulation on maximum permissible concentrations and intensities of agents harmful to health in the working environment (Journal of Laws 2026, item 447, as amended).
Regulation of the Minister of Health of 30 December 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal of Laws 2005, No. 11, item 86, as amended).
Regulation of the Minister of Health of 2 February 2011 on tests and measurements of agents harmful to health in the working environment (Journal of Laws 2011, No. 33, item 166, as amended).
Regulation of the Minister of the Environment of 9 December 2003 on substances posing a particular hazard to the environment (Journal of Laws 2003, No. 217, item 2141).
ADR Agreement: Government Statement of 6 March 2025 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), done at Geneva on 30 September 1957 (Journal of Laws 2025, item 642).

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out for the mixture.

SECTION 16: Other information

Full text of H- and EUH-statements:

Flam. Liq. 3	Flammable liquids, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment - chronic hazard, Category 3
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
EC number	European Community number
EC50	Median effective concentration
EN	European Standard
EWC	European Waste Catalogue
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Concentration causing the death of 50% of the population of test organisms
LD50	Dose causing the death of 50% of the population of test organisms
Log Pow	Partition coefficient n-octanol/water (Log Pow)
N.O.S.	Not otherwise specified
PBT	Persistent, Bioaccumulative and Toxic substance
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

Classification and procedures used to derive the classification of mixtures according to Regulation (EC) No. 1272/2008 [CLP]:

Asp. Tox. 1	H304	Based on the estimated kinematic viscosity value

Sources of data used to prepare the safety data sheet:
ECHA (European Chemicals Agency) databases.
Safety data sheets of raw material suppliers.
Publicly available toxicological databases.
Regulation (EC) No. 1272/2008 and all its amendments.

Training:
It is recommended that the user complete appropriate workplace training and occupational health and safety training before working with the product.

The data contained in this safety data sheet are based on current information from publicly available sources. The content of the safety data sheet is intended solely for purposes related to the protection of health and life and to ensuring the safety of people and the environment. The safety data sheet does not constitute a guarantee of product properties. It does not release the user from the obligation to handle the product correctly and safely in accordance with the manufacturer's instructions.