



NANOGRAFI YÜKSEK TEKNOLOJİ VE İLERİ MALZEMELER A.Ş.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Identity of The Substance/Mixture

Product name : Micronkote 207 Grey Dry Film Lubricant

Product Number : NG10CMW0947

1.2 Relevant Identified Uses of The Substance or Mixture

Identified Uses : Lubricant and additive

Uses Advised Against : No data available

1.3 Details of The Supplier of The Safety Data Sheet

Nanografi Yüksek Teknoloji ve İleri
Malzemeler A.Ş.
İvedik OSB Mah. 1364. Cad. No:47
Yenimahalle Ankara 06378
TÜRKİYE
Tel: +90 (312) 285 85 09
Tel: +90 (312) 210 13 09
www.nanografi.com

1.4 Emergency Telephone Number

Emergency telephone number : +90 (312) 285 85 09

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of The Substance or Mixture

CLP Regulation (EC) No 1272/2008:

Flammable liquids, Category 2 : H225

Skin irritation, Category 2 : H315

Serious eye damage, Category 1 : H318

Specific target organ toxicity, single exposure,
Category 3 : H336

Carcinogenicity, Category 1B : H350

Carcinogenicity, Category 2 : H351

Hazardous to the aquatic environment — chronic,
Category 1 : H410

NANOGRAFI YÜKSEK TEKNOLOJİ VE İLERİ MALZEMELER A.Ş.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

2.2 Label Elements

CLP Regulation (EC) No 1272/2008:

Pictogram:



Signal Word

: Danger

Hazard Statements:

- H225 : Highly flammable liquid and vapour
- H315 : Causes skin irritation
- H318 : Causes serious eye damage
- H336 : May cause drowsiness or dizziness
- H350 : May cause cancer
- H351 : Suspected of causing cancer
- H410 : Very toxic to aquatic life with long lasting effects

Precautionary statements:

- P210 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260 : Do not breathe vapours.
- P264 : Wash hands thoroughly after handling.
- P273 : Avoid release to the environment.
- P280 : Wear protective gloves/protective clothing/eye protection/face protection.
- P303+P361+P353 : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- P305+P351+P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

NANOĞRAĐI YÜKSEK TEKNOLOĐI VE İLERİ MALZEMELER A.Ő.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

P308+P313

: IF exposed or concerned: Get medical advice/attention.

P370+P378

: In case of fire: Use appropriate media to extinguish.

P391

: Collect spillage.

P403+P233

: Store in a well-ventilated place. Keep container tightly closed.

P501

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

2.3 Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixture

Substance Name	Identification of the substance/mixture	Concentration (%)	Classification
Methyl isobutyl ketone	CAS No:108-10-1 EC No: 203-550-1	≥8.0 - <17.0 %	Flam. Liq. 2 ; H225 Carc. 2 ; H351 Acute Tox. 4 (Inhalation) ; H332 STOT SE 3 ; H336 Eye Irrit. 2 ; H319
Butanol	CAS No: 71-36-3 EC No: 200-751-6	≥5.0 - <12.0 %	Flam. Liq. 3; H226 Acute Tox. 4 (Oral); H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335 STOT SE 3; H336
Butyl glycol	CAS No: 111-76-2 EC No: 203-905-0	≥4.0 - < 13.0 %	Acute Tox. 4 (Oral); H302 Acute Tox. 3 (Dermal); H311 Acute Tox. 4 (Inhalation); H332 Skin Irrit. 2; H315

NANOĞRAFI YÜKSEK TEKNOLOJİ VE İLERİ MALZEMELER A.Ş.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

			Eye Irrit. 2; H319
Zinc oxide	CAS No: 1314-13-2 EC No: 215-222-5	≥0.30 - <2.75 %	Aquatic Acute 1; H400 Aquatic Chronic 1; H410
Trizinc bis(orthophosphate)	CAS No: 7779-90-0 EC No: 231-944-3	≥0.90 - <5.50 %	Aquatic Acute 1; H400 Aquatic Chronic 1; H410
Isobutanol	CAS No: 78-83-1 EC No: 201-148-0	≥1.60 - <3.96 %	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335 STOT SE 3; H336
Formaldehyde	CAS No: 50-00-0 EC No: 200-001-8	≥0.05 - <0.33 %	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Muta. 2, H341 Carc. 1B, H350 Skin Corr. 1B, H314 Skin Sens. 1, H317
Methyl Ethyl Ketone	CAS No: 78-93-3 EC No: 201-159-0	≥7.0 - <19.0 %	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
Xylene	CAS No: 1330-20-7 EC No: 215-535-7	≥2.25 - <14.432 %	Flam. Liq. 3; H226 Acute Tox. 4 (Dermal); H312 Acute Tox. 4 (Inhalation); H332 Skin Irrit. 2; H315
Ethylbenzene	CAS No: 100-41-4 EC No: 202-849-4	<3.60368 %	Flam. Liq. 2; H225 Acute Tox. 4 (Inhalation); H332 Asp. Tox. 1; H304 STOT RE 2; H373

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

The symptoms of poisoning may appear after a delay, even after some time has passed since exposure. Therefore, in case of doubt, or if exposure to the chemical product or discomfort persists, seek medical assistance by showing the product's Safety Data Sheet (SDS).

- By skin contact : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower
- By eye contact : After eye contact: rinse out with plenty of water. Remove contact lenses.
- By inhalation : Move affected person to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, seek medical attention."



NANOGRAFI YÜKSEK TEKNOLOJİ VE İLERİ MALZEMELER A.Ş.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

By swallowing

: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed:

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

No data available

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media

: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For large fires, dry chemicals, foam, or water spray may be used. For small fires, carbon dioxide, dry chemicals, or water spray are used. Containers exposed to fire can be extinguished with water.

Unsuitable extinguishing media

: For this substance/mixture no limitations of extinguishing agents are given

5.2 Special Hazards Arising from The Substance or Mixture

Vapors are heavier than air and can travel along the ground to reach flammable sources.

Electrostatic charges may build up during transfer of the product from the container.

Ensure that all equipment is properly grounded.

Vapors may form explosive mixtures with air.

Hazardous Products That May Form as a Result of Combustion

Thermal decomposition of this product during a fire or under conditions of very high heat may result in the release of the following products:

Carbon oxides and trace amounts of fully combusted carbon compounds. Sulfur compounds. Formaldehyde.

Chlorine compounds. Nitrogen compounds. Phosphorus compounds. Metal compounds.

5.3 Advice for Firefighters

Fire protection measures

: Do not attempt to intervene without appropriate protective equipment. For more information, see Section 8: "Exposure Controls/Personal Protection". A respirator and protective clothing must be worn. Determine whether the area should be evacuated or isolated in accordance with your local emergency plan. Extinguish containers exposed to flames with a water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

A self-contained breathing apparatus and protective clothing must be worn. Determine whether the area needs to be evacuated or isolated in accordance with your local emergency plan. Eliminate all potential ignition sources.

For non-emergency personnel:

NANOĞRAFI YÜKSEK TEKNOLOJİ VE İLERİ MALZEMELER A.Ş.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8

6.2 Environmental Precautions

Use sand, soil, or other suitable barriers to prevent it from spreading or entering sewers, ditches, or rivers. Do not discharge into sewers.

6.3 Methods and Material for Containment and Cleaning Up

Determine whether you need to evacuate or isolate the area in accordance with your local emergency plan. Remove all potential flammable materials. Very large spills must be contained using procedures such as dikes, etc. Mop up, wipe away, or soak up the spill with absorbent material and place it in a covered container. The spilled product creates an extremely slippery surface.

6.4 Reference to Other Sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling****A- General precautions for safe use**

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used. General and local ventilation is required. Avoid contact with skin and eyes. Do not inhale vapors. Do not inhale spray. Do not ingest. Do not discharge into the sewer system.

B- Technical recommendations for the prevention of fires and explosions

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.

C- Technical recommendation on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D- Technical recommendations to prevent environmental risks



NANOĞRAFI YÜKSEK TEKNOLOJİ VE İLERİ MALZEMELER A.Ş.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

Although this product is not classified as hazardous to the environment, it is recommended to handle it responsibly. Using contamination control barriers and keeping absorbent materials nearby in case of accidental spillage is advised as a precautionary measure.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Storage conditions

: The product must be stored in its original, tightly sealed packaging, away from direct sunlight, heat, sparks, and open flames, in a dry and well-ventilated area. Store in a fire-resistant, well-ventilated area. Electrostatic charges may build up when transferring the product from its container. Ensure that all equipment is properly grounded. Keep the container tightly closed. Vapors may form explosive mixtures with air. Recommended storage temperature: +5 °C to +30 °C. The product must be protected from freezing and extreme temperatures. After prolonged storage, the product must be thoroughly mixed before use until it becomes homogeneous.

7.3 Specific End Use(s)

Please refer to the technical data sheet provided upon request.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

No data available

8.2 Exposure Controls

Appropriate Engineering Controls

: Ventilation: See Section 7.1.

Respiratory Protection

: Appropriate respiratory protection must be worn if the product is used in large quantities, in enclosed spaces, or in other situations where the exposure limit may be reached or exceeded during work. If the product is used in any situation where an aerosol or mist may form—such as during spraying or similar activities—appropriate respiratory protection must be worn. Depending on working conditions, wear a respirator with an AP filter or use a self-contained breathing apparatus. The choice of filter type depends on the amount and type of chemical used in the workplace. For information regarding filter specifications, contact your respiratory protection supplier.

Hand Protection

: To prevent skin contamination, chemical-resistant gloves must be put on and removed properly:



NANOĞRAĐI YÜKSEK TEKNOLOĐI VE İLERİ MALZEMELER A.Ş.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

Polyvinyl alcohol (PVA). Silver Shield(TM). Nitrile rubber. 4H(TM). For information on the service life of the gloves, contact your chemical protective glove supplier. Viton™.

Eye and Face Protection

: Safety goggles must be worn.

Skin Protection

: Wear a waterproof coverall in situations where serious skin contact may occur.

Environmental Exposure Controls

: Practice good industrial hygiene. Wash hands after use, especially before eating, drinking, or smoking. Remove contaminated clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

Physical state	: Liquid
Colour	: Grey
Odour	: No data available
pH	: No data available
Melting point	: No data available
Initial boiling point	: No data available
Sublimation temperature	: No data available
Flash point	: ≤23°C
Flammability	: No data available
Upper/lower flammability or explosive limits	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: 20±5 @ 25± 2 C°
Water solubility	: No data available
Partition coefficient n-octanol/water	: No data available
Vapor pressure	: No data available
Density	: 0.9±0.1 g/mL



NANOĞRAĐI YÜKSEK TEKNOLOĐI VE İLERİ MALZEMELER A.Ş.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Particle size	: No data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical Stability

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of Hazardous Reactions

No data available

10.4 Conditions to Avoid

Avoid all situations that could cause a fire.

Materials to avoid: May react with strong oxidizing agents.

10.5 Incompatible materials

No data available

10.6 Hazardous Decomposition Products

Thermal degradation of this product during a fire or under conditions of extremely high heat may result in the following degradation products: Carbon oxides and trace amounts of fully combusted carbon compounds. Sulfur compounds. Formaldehyde. Chlorine compounds. Nitrogen compounds. Phosphorus compounds. Metal compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Hazard Classes

Acute toxicity

Skin corrosion/irritation	: If it comes into contact with large areas of the skin, it can cause significant systemic adverse effects.
Serious eye damage/eye irritation	: No data available
Respiratory or skin sensitization	: Exposure may cause temporary numbness and dizziness.
Ingestion	: Small amounts transferred from the fingers to the mouth during use should not cause harm.



NANOĞRAĐI YÜKSEK TEKNOLOĐI VE İLERİ MALZEMELER A.Ş.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

Chronic Toxicity

Skin Contact

: Skin contact may cause sensitivity in susceptible individuals. Repeated or prolonged contact can lead to a loss of skin oils, resulting in dermatitis. It is suspected of causing cancer.

Inhalation Exposure

: May cause dizziness, numbness, headache, nausea, and severe loss of consciousness. It is suspected of causing cancer.

If Swallowed

: Repeated ingestion may cause systemic side effects. It is suspected to cause genetic defects.

Toxicokinetics, metabolism, and distribution

Since it is exposed to high concentrations, it can be absorbed by the skin.

Other Health Threats

This product contains dust(s) that are hazardous if inhaled. This is not related to the product's form.

11.2 Additional Information

No data available

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**

No adverse effects on organisms have been observed.

12.2 Persistence and Degradability

The organic solvents in the product are biodegradable. Organic solvents can evaporate into the atmosphere as they break down.

12.3 Bioaccumulative Potential

Low bioaccumulation potential.

12.4 Mobility in Soil**Fate and effects in wastewater treatment plants:**

No adverse effects on bacteria are anticipated.

12.5 Results of PBT and vPvB Assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine Disrupting Properties

NANOGRAFI YÜKSEK TEKNOLOJİ VE İLERİ MALZEMELER A.Ş.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

No data available

12.7 Other Adverse Effects

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Regional Regulations (Waste)

: Disposal must comply with official regulations. Refer to the Waste Management Regulation.

Waste Treatment Methods

: Dispose of the contents/container in accordance with the instructions of an approved waste collector

SECTION 14: TRANSPORT INFORMATION

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1224	UN 1224	UN 1224		
14.2. UN proper shipping name				
Ketone, Liquid, N.O.S. (Methyl ethyl ketone/methyl isobutyl ketone)	Ketone, Liquid, N.O.S. (Methyl ethyl ketone/methyl isobutyl ketone)	Ketone, Liquid, N.O.S. (Methyl ethyl ketone/methyl isobutyl ketone)		
14.3. Transport hazard class(es)				
3 Transport label: 3 – Flammable liquids	3 Transport label: 3 – Flammable liquids	3 Transport label: 3 – Flammable liquids		



SAFETY DATA SHEET

NANOĞRAFI YÜKSEK TEKNOLOJİ VE İLERİ MALZEMELER A.Ş.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

14.4. Packaging group

II	II	II		
----	----	----	--	--

14.5. Environmental hazards

no	no	no		
----	----	----	--	--

14.6 Special Precautions for User

ADR/RID:

Transport in accordance with applicable ADR/RID regulations. Keep away from heat, sparks, open flames and hot surfaces. No smoking.

IMDG:

Transport in accordance with applicable IMDG regulations.

EmS: F-E, S-D

IATA:

Transport in accordance with applicable IATA Dangerous Goods Regulations.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for The Substance or Mixture

- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Regulation (EU) No 2024/590, about substances that deplete the ozone layer: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

Seveso III: Not relevant

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc.): Shall not be used in: —ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, —tricks and jokes, —games for one or more participants, or any article intended to be used as such, even with ornamental aspects. Specific provisions in terms of protecting people or the environment: It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product. Other legislation: The product could be affected by sectorial legislation

15.2 Chemical Safety Assessment

The supplier has not carried out evaluation of chemical safety

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

NANOĞRAĐI YÜKSEK TEKNOLOĐI VE İLERİ MALZEMELER A.Ş.

Following the amendment of Regulation (EU) No. 2015/830, this SDS is in compliance with Regulation (EC) No. 1907/2006 (REACH).

ADR	European agreement concerning the international carriage of dangerous goods by road
IMDG	International maritime dangerous goods code
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
COD	Chemical Oxygen Demand
BOD	Biochemical Oxygen Demand
LC50	Lethal Concentration 50
LD50	Lethal Dose 50

Other Information: The information provided in this document has been prepared based on our current knowledge and records and is intended for guidance only. However, it is not guaranteed to be comprehensive or applicable to all situations. These details may be used for the relevant product, provided that necessary and appropriate precautions are taken. Nevertheless, the information presented here should not be interpreted as a guarantee of the product's properties