SAFETY DATA SHEET

NOVIPER DB 50

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

1.1. Product identifier

Name of product	Index No.	EC No.	CAS No.
Di(2,4-dichlorobenzoyl)peroxide, paste 50% in silicone oil	------	205-094-9	133-14-2

REACH No. of registration: 01-2119965137-32-0002

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

1. industrial use as polymerization initiators, cross linking and curing agents

Uses advised against: not specified

1.3. Details of the supplier of safety data sheet

NOVICHEM Sp. z o. o.
ul. Główna 4
41-503 CHORZÓW
POLAND
tel./fax. +48-32-245 97 35
e-mail: novichem@novichem.com
person responsible for the SDS: sds@novichem.com

1.4. Emergency telephone number

CHEMTREC: (800) 424-9300
Outside USA – (703) 527-3887 collect calls accepted

NFPA Rating: NFPA 432 – Organic Peroxide Classification: Class III
HMIS Classification: Health: 1 Flammability: 2 Reactivity: 2

Emergency Overview: White Paste. Slight odor. Reactive to temperature above 140°F (60°C) may cause violent decomposition. May cause eye, skin and respiratory irritation. Avoid release to the environmental.

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

NOVIPER DB 50 (Bis(2,4-dichlorobenzoyl)peroxide, paste 50% in silicone oil)			
Org. Perox. D	Organic Peroxide Type D	H242	Heating may cause a fire.
Skin. Sens. 1	Skin sensitisation, Category 1	H317	May cause an allergic skin reaction.
Repr. 1B	Reproductive toxicity, Category 1B	H360	May damage fertility or the unborn child.

2.2. Labels elements

Pictograms: GHS02  GHS07  GHS08 

Signal word: **DANGER**

Hazard statements:
H242 Heating may cause a fire
H317 May cause an allergic skin reaction
H360 May damage fertility or the unborn child

Precautionary statements:
P201 Obtain special instructions before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

not specified

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances

Assay %(w/w)	Ingredient name	Index No.	EC No.	CAS No.
49÷52	Bis(2,4-dichlorobenzoyl)peroxide	----	205-094-9	133-14-2
48÷51	polydimethylosiloxane	----	-----	63148-62-9

This product possible contains substances listed on a Candidate List of Substances of Very High Concern (SVHC) updated on 15th January 2019, in quantities <0.15 %w/w.
- Octamethylcyclotetrasiloxane (D4) CAS#556-67-2
- Decamethylcyclopentasiloxane (D5) CAS#541-02-6
- Dodecamethylcyclohexasiloxane (D6) CAS#540-97-6

SECTION 4: FIRST AID MEASURES

4.1. Description of first measures

Inhalation Remove to fresh air. Call a physician immediately.
Skin Wash skin with soap and water, if visible irritation, seek medical advice
Eyes Flush abundantly open eyes with running water for at least 15 minutes, seek immediate medical advice.
Ingestion Do NOT induce vomiting. Call a physician immediately.

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

- Contact with skin: redness, possible allergic
- Eye contact: irritation, redness
- Ingestion: abdominal pain, vomiting

May cause skin sensitization. May damage fertility or the unborn child

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

Attending physician should treat exposed patients symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Waterspray, foam, dry chemical powder, carbon dioxide, sand

Extinguishing media which must NOT be used for safety reasons: high volume water jet, halones

5.2. Special hazards arising from the substance or mixture

Hazard decomposition /combustion products: carbon dioxide, a mixture of dichlorobenzoic acid, biphenyl, dichlorobenzene, fumes: trace amounts of PCBs (ppm)

NOTE: The re-ignition may occur and the product keeps burning, vapours may form explosive mixtures with air and do not breathe fumes from fire or explosion.

5.3. Advice for firefighters

Personal protective equipment for firefighters: Wear suitable fire resistant protective clothing respiratory protection equipment.

Further information: The containers and equipment located near the fire should be cooled with water;
water used to extinguish a fire should not be allowed to enter the drainage system or water courses.
After fire, ventilate thoroughly the area and soak with water, clean the walls and metallic surfaces.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedure

Wear protective clothing, protective gloves, eye protection and face. Do not let the peroxide into drains and ground water, prevent hot, contact with combustible materials and flammable substances.

6.2. Environmental precautions

Protect from entering drains, surface and ground water and soil.

6.3. Methods and material for containment and cleaning up

Protect drains. Collect material into sealable plastic containers and transported to the disposal site. Waste should NOT be closed.

6.4. Reference for other sections

Personal protective equipment - see section 8
Disposal - see section 13

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Strictly limit the quantities of product in the work area to those which are absolutely necessary for the work in hand. Great cleanliness in work areas is a necessary and important factor for safety. Never weigh out in the storage room. Handle and open container with care (risk of over pressurization in containers).

Eliminate all sources of ignition, and do not generate flames or sparks. Take precautionary measures against static discharges. Apply earth when transferring from one container to another. Confinement must be avoided. Use explosion protected equipment.

Use non-sparking tools in areas where explosive vapour/air mixtures may occur. Keep product and emptied container away from heat and sources of ignition. Do not cut or weld on or near this container even when empty. Never mix peroxides directly with accelerators (risk of explosion). Add each component separately to the resin.

Protect from contamination. Keep away from incompatible materials such as: Strong oxidizing agents, Powerful reducers, Acids, Bases, Amines, transition metal salts, sulphur compounds, Rust, ash, dusts (risk of self-accelerating exothermic decomposition). Never return any product to the container from which it was originally removed (risk of decomposition)

WARNING!
ORGANIC PEROXIDE
FOR INDUSTRIAL USE ONLY
Do NOT take internally

7.2. Conditions for safe storage, including any incompatibilities

Store in accordance with local/national regulations. Store in well insulated area (peroxide area) away from other substances. Use non-combustible construction materials. Provide earth and safe electrical equipment

Keep tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition, and direct sunlight. Store in original container. Use only very clean containers and equipment free from traces of impurities. Never return unused material to storage receptacle. Do not reuse empty packaging to store other products.

Keep container upright to prevent leakage. Provide a catch-tank in a bunded area. Provide impermeable floor.
Storage buildings must be built and equipped so as not to exceed the maximum proscribed temperature limit.
Store product in the temperature range of 41° to 86°F (5° to 30°C).

7.3. Specific end use(s)

No information about other applications than the udder in subsection 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits has not been established.
DNEL for employee (chronic exposure by inhalation, systemic): 3,53 mg/m^3
NOAEC: 264.47 mg/m^3 (repeat dose)
DNEL for workers (dermal chronic, systemic): 10 mg / kg body weight / day
NOAEC: 300 mg / kg (repeated)

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Make sure that working area is well ventilated. Explosion proof ventilation is recommended.

8.2.2. Individual protection measure, such as personal protective equipment

a/ Eye/face protection
Use safety goggles or face protection

b/ Skin protection
Use appropriate protective antistatic clothing
Use appropriate protective gloves of synthetic rubber like neoprene or butyl-rubber (thickness; 0,5 mm, rupture time > 8h)

c/ Respiratory protection
When exposure exceed the PEL or TLV, use NOISH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134

d/ Thermal hazards
in normal work condition – no thermal hazard

Other information: Emergency shower and facilities for rinsing eyes must be accessible.

Hygiene at the work: General regulations on hygiene. Do not allow them to cross in the workplace environment, regulatory exposure limits. After working Remove contaminated clothing - not to take home. Do not eat, drink or smoke in the production and storage facilities. After work, wash your hands each time.

PN-86/Z-04050.01 - Protection of air quality. Instruments and sampling kits. General.
PN-89/Z-04008.07 - Protection of air quality. Sampling. General. Principles of sampling in the work environment and the interpretation of results.

8.2.3. Environmental exposure controls

Protect against the introduction into the municipal water and sewage system and watercourses.
PNEC: freshwater water: 0.29 µg/l
PNEC sea water: 0.03 µg/l
PNEC sediment-water sweet: 1.89 mg/kg
PNEC sediment- see water: 0.19 mg/kg
PNEC soil: 0.38 mg/kg
PNEC STP: 50 mg/l

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical protection

a/ Appearance
paste

b/ Odour
faint

c/ Odour threshold
not specified

d/ pH
4 - 7

e/ Melting point/freezing point
decomposes before melting

f/ Initial boiling point and boiling range
decomposes before boiling

g/ Flash point
above the SADT value
h/ Evaporation rate
not applicable
i/ Flammability (solid, gas)
decomposition products may be flammable
j/ Upper/lower flammability or explosive limits
not determined
k/ Vapour pressure
< 0.009 Pa at 25°C
l/ Vapour density
not determined
m/ Relative density
1.2 at 20°C
n/ Solubility(ies)
in water: 0.02993 mg/l at 25°C)
other solvents: soluble in most organic solvents
o/ Partition coefficient: n-octanol/water
log Kow (Pow): 6 at 20°C
p/ Auto-ignition temperature
the substance shows self heating under test conditions due to decomposition and not due to oxidative self heating
q/ Decomposition temperature
SADT: ca. 60°C (see section 10)
r/ Viscosity
thixotropic paste (20°C)
s/ Explosive properties
no
t/ Oxidising properties
no

9.2. Other information
Active oxygen content: 2.06 – 2.15 %

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
sensitive to exothermic decomposition, decomposition is initiated by heat, contact with impurities (e.g. acids, heavy metal compounds, amines), friction or impact

10.2. Chemical stability
When reaching or exceeding the SADT (Self Accelerating Decomposition Temperature) a dangerous self-accelerating decomposition reaction can occur, which can lead to an explosion or fire.

10.3. Possibility of hazardous reactions
SADT (self accelerating decomposition temperature) possible at temperature above approximately +60°C,
vapour may form explosive mixtures with air

10.4. Conditions to avoid
Avoid high temperatures, light, pollution, rust.

10.5. Incompatible materials
Avoid contact with acids, alkalis, amines, copper, iron

10.6. Hazardous decomposition products
carbon dioxide, hydrocarbons, carbon monoxide, furan, vapours containing PCBs in trace amounts (ppm),
In the case of proper storage and handling, no hazardous decomposition products

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Inhalation: not dusty, it does not poison inhalation
Contact with skin: redness

Eye contact: irritation, redness
Ingestion: abdominal pain, vomiting

Acute toxicity:	oral: LD50(rat, female):> 2500 mg/kg; LD50(rat, male):> 12000 mg/kg dermal: LD50 (rabbit, male/female, 14 days): > 8000 mg/kg
Skin corrosion/irritation:	rabbit – not irritant
Serious eye damage/irritation:	rabbit – not irritant
Respiratory or skin sensitisation:	adverse effect observed
Germ cell mutagenicity:	no adverse effect observed
Carcinogenicity:	no relevant information available
Reproductive toxicity:	NOAEL: 100 mg/kg bw/day; toxicant Category 1B
STOT-single exposure:	no study available
STOT-repeated exposure:	no study available
Aspiration hazard:	no study available

Carcinogenicity Status

Chemical Name	Wt.%,	CAS No.	
Di(2,4-dichlorobenzoyl)peroxide	**~ 50%**	**133-14-2**	
IARC Group 1, Group 2A or Group 2B Carcinogen			Not Listed
National Toxicology Program Know or Suspect Carcinogen			Not Listed
ACGIH Confirmed or Suspected Carcinogen			Not Listed
OSHA select or Possible Select Carcinogen			Not Listed
Poly(dimethylsiloxane)	**~50%**	**63148-62-9**	
IARC Group 1, Group 2A or Group 2B Carcinogen			Not Listed
National Toxicology Program Know or Suspect Carcinogen			Not Listed
ACGIH Confirmed or Suspected Carcinogen			Not Listed
OSHA select or Possible Select Carcinogen			Not Listed

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

LC_{50}(96h)(Poecilia reticulata): > 1000 mg/l
EL_{50}(48h)(*Daphnia magna*): > 100 mg/l
NOELR (72h)(algae): 100 mg/l
EC10 STP(microorganisms) 500 – 1000 mg/l

12.2. Persistence and degradability

inherently biodegradable

12.3. Bioaccumulative potential

Log Kow = 6 shows that it has bioaccumulative potential

12.4. Mobility in soil

Koc = 4.8 at temp. 30°C

12.5. Results of PBT and vPvB assessment

not a PBT / vPvB

12.6. Other adverse effects

no

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Method:

Dispose the product in an approved industrial waste landfill or incinerate in accordance with applicable Federal, state and local regulations. Since the emptied container retains product residue, all labeled hazard precautions must be observed. Do NOT mix with other chemical wastes. Do not put solutions containing this product into sewer systems.

RCRA

Is the unused product a RCRA hazardous waste if discarded? (Yes/No) Yes
If yes, the EPA Hazardous Waste Code is: D003 (reactivity)

SECTION 14: TRANSPORT INFORMATION

DOT

DOT Status:	REGULATED MATERIAL
DOT Shipping Name:	ORGANIC PEROXIDE TYPE D, SOLID (DI(2,4-DICHLOROBENZOYL)PEROXIDE 50%)
UN/NA Number	3106
Hazad Class:	5.2
DOT Packing Group:	II
ERG#:	145
Harmonized Tariff Number:	3815.19.0000

ICAO/IATA:

Status:	REGULATED MATERIAL
Proper Shipping Name:	ORGANIC PEROXIDE TYPE D, SOLID (DI(2,4-DICHLOROBENZOYL)PEROXIDE 50%)
UN/NA Number	3106
IATA-DGR Class:	5.2
Packing Group:	None
ERG Code:	145
Special Provisions:	A20 – During the course of transport, this substance must be protect from direct sunshine. and stored in a cool and well ventilated place, away from all sources of heat. A statement to this effect must be included on the Shipper's Declarations.

IMDG:

Status:	REGULATED MATERIAL
Proper Shipping Name:	ORGANIC PEROXIDE TYPE D, SOLID (DI(2,4-DICHLOROBENZOYL)PEROXIDE 50%)
UN/NA Number	3106
Hazad Class:	5.2
Packing Group:	None
EmS:	F-J S-R
Flash Point (°F/°C)	Not determined

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code

Not authorized for carriage in bulk

SECTION 15: REGULATORY INFORMATION

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

International Inventories:

USA TSCA Inventory Status:	All of the components of this product are listed on the US EPA TSCA Inventory, or exempt from listing.
Canadian DSL	All of the components of this product are listed on the Canadian Domestic Substances List.

State and Federal Regulations:

(Chemical Name,	**Wt.%,**	**CAS No.)**
Di(2,4-dichlorobenzoyl)peroxide	**~ 50%**	**133-14-2**
New Jersey Right-to Know List		Listed
New Jersey Trade Secret Registry umber(s):		N/A
SARA Section 311/312 Hazard Class		This product is classified as a SARA ACUTE HEALTH HAZARD. This product is classified as a SARA REACTIVE HAZARD. This product is classified as a SARA FIRE HAZARD
Other Information		This product does not contain any ingredients subject to the reporting requirements of SARA Title III, Section 313 (40 CFR Part 372)
SVHC – Candidate List		the components – listed (see section 3.1)
Chemical description		Di(2,4-dichlorobenzoyl)peroxide, 50% paste in silicon oil

Labelling

Pictograms: GHS02  GHS07  GHS08 

Signal word: **DANGER**

Hazard statements:
H242 Heating may cause a fire
H317 May cause an allergic skin reaction
H360 May damage fertility or the unborn child
Precautionary statements:
P201 Obtain special instructions before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

15.2. Chemical safety assessment
CSA has been made

SECTION 16: OTHER INFORMATION

H242 Heating may cause a fire
H317 May cause an allergic skin reaction
H360 May damage fertility or the unborn child

SDS is prepared in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
Source: Chemical Safety Report. Verification of the section: 3.1, 15.1, 16.

Explanation of abbreviations / acronyms:
DNEL - derived dose level (concentration) at which no observed adverse effect level [mg / kg, mg / l]
PNEC - predicted concentrations do not cause changes in the environment [mg / kg, mg / l]
NOEC - the highest dose, or concentration of a toxic substance at which no adverse effect is observed in its operation.
NOAEL - no observable adverse effect level
NDS - Exposure Limit - the average weighted concentration, the impact on the employee, during an 8-hour daily and average weekly working time laid down in the Labour Code, the period of its activity should not cause negative changes in its state of health and in the health of future generations.
Training:
Those involved in trading a hazardous substance should be trained in the handling, safety and hygiene.
Drivers should be trained and obtain proper certification in accordance with the requirements of ADR.

Enclosures:
SN1 – Manufacture: Industrial Formulation - Formulation and (re)packing of organic peroxides and mixtures
SN2 – Industrial Formulation - Industrial formulation of organic peroxides in materials
SN3 – Use at industrial site - Industrial use of organic peroxides as polymerization initiators, crosslinking agents or curing agents