

Safety data sheet

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

1.1. Product identifier

Identification of the mixture:

Commercial name: DARANÀ
Commercial Code: DRN

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

Recommended use:

Layering of metals on foil

Uses advised against:

All uses not listed in the recommended uses

1.3. Details of the supplier of the safety data sheet

Supplier:

Nikkolor Italia s.r.l. Viale Vittorio Veneto, 186 - 96014 - Floridia (SR) Italy
Tel.+39 0931 941789 (ore 9:00 - 18:00)

Competent person responsible for the safety data sheet::

nikkolor@gmail.com

1.4. Emergency telephone number

Poison Control Center Garibaldi Hospital - Piazza S. Maria di Gesù, 6 - Tel. 095-7594120 - 095-7594032 (H24)

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

Polyethylene terephthalate filler tape with layers made of polymers, metals and aluminum deposited by metallization in © FluidMetal.

LM001B LM105
Zirconium 67.02 65.67
Titanium 8.8 3.28
Copper 10.61 15.6
Nickel 9.8 11.75
Niobium - -
Beryllium 3.76 -
Aluminum - 3.7

SECTION 3. Composition/information on ingredients

The preparation is not to be considered dangerous for the purposes of assessing health hazards pursuant to Ministerial Decree 28.4.1997 and of the Legislative Decree 285 of 16.07.1998.

The product during handling can release small quantities of dust. In case of accidental overheating of the product during processing, dangerous decomposition products such as CO and / or CO2 and acrylic monomers may develop.

Inhalation: vapors generated by accidental overheating of the product can irritate the nose, throat and lungs and can cause headache, drowsiness, dizziness and nausea. H335

Contact with eyes and skin: vapors generated by accidental overheating of the product can cause irritation. R36

The product can accumulate electrostatic charges (see point 7.1).

SECTION 4. First aid measures

4.1. Description of first aid measures.

In case of inhalation of the dust or vapors of the overheated product, accidentally breathe uncontaminated air; in case of discomfort or prolonged exposure consult a doctor.

In case of accidental contact of the dust or vapors of the overheated product with the eyes, wash the eyes with water for at least 15 minutes and consult a doctor.

In case of accidental contact of the dust or vapors of the overheated product with the skin, wash immediately and abundantly with soap and water.

In case of ingestion of the powder, wash the mouth with plenty of water and consult a doctor.

SECTION 5. Firefighting measures**5.1. Extinguishing media**

The product is a combustible solid. Avoid contact with sources of ignition. Avoid exposing to temperatures higher than 250 ° C.

Suitable extinguishing media: nebulized and / or pulverized water.

Unsuitable extinguishing media: CO2.

Risks of combustion: carbon dioxide (CO2), carbon monoxide (CO), (acetaldehyde, methane, dioxolane, ethanol and other products if combustion takes place in an oxygen-poor atmosphere).

Protective equipment: use suitable respirators for CO and CO2.

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

Not applicable.

6.2. Environmental precautions.

Not applicable.

6.3. Methods and materials for containment and cleaning up.

Not applicable.

6.4. Reference to other sections.

Any information regarding personal protection and disposal is given in sections 8 and 13.

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

Handle the product after consulting all the other sections of this safety data sheet. Avoid the dispersion of the product in the environment. Do not eat, drink or smoke during use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities.

Keep only in the original container. Keep the containers closed, in a well-ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, checking section 10.

7.3. Specific end uses.

Information not available.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Normative requirements:

GBR United Kingdom EH40 / 2005 Workplace exposure limits

ITA Italy Legislative Decree 9 April 2008, n.81

EU OEL EU Directive 2009/161 / EU; Directive 2006/15 / EC; Directive 2004/37 / EC; Directive 2000/39 / EC.

TLV-ACGIH ACGIH 2016

8.2. Exposure controls.

Considering that the use of adequate technical measures should always take priority over personal protective equipment, ensure good ventilation in the workplace through effective local exhaust. Individual protection devices must bear the CE marking which certifies their compliance with current regulations.

HAND PROTECTION

Protect hands with category III work gloves (ref. Standard EN 374).

For the final choice of the material of the work gloves, the following must be considered: compatibility, degradation, breakage time and permeation.

In the case of preparations, the resistance of work gloves to chemical agents must be checked before use as it is not foreseeable. Gloves have a wear time that depends on the duration and mode of use.

SKIN PROTECTION

Wear category I professional long-sleeved work clothes and safety footwear (ref. Directive 89/686 / EEC and standard EN ISO 20344). Wash with soap and water after removing protective clothing.

EYE PROTECTION

It is recommended to wear airtight protective goggles (ref. Standard EN 166).

RESPIRATORY PROTECTION

In case of exceeding the threshold value (e.g. TLV-TWA) of the substance or of one or more of the substances present in the product, it is advisable to wear a mask with a type A filter whose class (1, 2 or 3) must be chosen in relation to the limit concentration of use. (ref. standard EN 14387). If there are gases or vapors of a different nature and / or gases or vapors with particles (aerosols, fumes, mists, etc.), combined filters must be provided.

The use of respiratory protection means is necessary in case the technical measures adopted are not sufficient to limit the exposure of the worker to the threshold values taken into consideration. The protection offered by the masks is however limited.

In the event that the substance in question is odorless or its olfactory threshold is higher than the relative TLV-TWA and in the event of an emergency, wear an open-circuit compressed air breathing apparatus (ref. Standard EN 137) or a self-contained breathing apparatus. outdoor air (ref. EN 138 standard). For the correct choice of the respiratory protection device, refer to the EN 529 standard.

ENVIRONMENTAL EXPOSURE CONTROLS.

Emissions from manufacturing processes, including those from ventilation equipment should be controlled for compliance with environmental protection legislation.

SECTION 9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance: solid

Odor: odorless

pH: ()

Boiling point / boiling range: ()

Melting point / range: 250 ° C (PET)

Flash point: ()

Flammability (solid, gas): ()

Auto flammability: ()

Explosive properties: ()

Oxidizing properties: ()

Vapor pressure: ()

Relative density: 0.93

Solubility: ()

- water solubility: negligible

- fat solubility: ()

Partition coefficient: n-octanol / water: ()

Appearance: solid

Odor: odorless

pH: ()

Boiling point / boiling range: ()

9.2. Other information.

Information not available.

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.
Conditions to avoid: exceeding the temperature of 250 ° C and exposure to flame.

10.2. Chemical stability.

The product is stable under normal conditions of use and storage.

10.3. Possibility of hazardous reactions.

In normal conditions of use and storage no dangerous reactions are foreseeable.

10.4. Conditions to avoid.

None in particular. However, follow the usual precautions towards chemicals.

10.5. Incompatible materials.

Information not available.

10.6. Hazardous decomposition products.

Information not available.

SECTION 11. Toxicological information

Correct use of the product as described in point 7 does not have toxicological effects on humans. The dust accidentally released from the product can be slightly irritating on contact with the eyes and like any type of dust it can aggravate some pre-existing dysfunctions of the respiratory system such as bronchitis and asthma.

11.1. Information on toxicological effects.

ACUTE TOXICITY.

LC50 (Inhalation - vapors) of the mixture: Not classified (no relevant component).

LC50 (Inhalation - mists / powders) of the mixture: Not classified (no relevant component).

LD50 (Oral) of the mixture:> 2000 mg / kg

LD50 (Dermal) of the mixture: Not classified (no relevant component).

SKIN CORROSION / SKIN IRRITATION.

It does not meet the classification criteria for this hazard class.

SERIOUS EYE DAMAGE / EYE IRRITATION.

It does not meet the classification criteria for this hazard class.

RESPIRATORY OR SKIN SENSITIZATION.

It does not meet the classification criteria for this hazard class.

MUTAGENICITY ON GERMINAL CELLS.

It does not meet the classification criteria for this hazard class.

CARCINOGENICITY.

It does not meet the classification criteria for this hazard class.

REPRODUCTION TOXICITY.

It does not meet the classification criteria for this hazard class.

SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE.

It does not meet the classification criteria for this hazard class.

SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE.

It does not meet the classification criteria for this hazard class.

DANGER IN CASE OF SUCTION.

It does not meet the classification criteria for this hazard class.

SECTION 12. Ecological information

Use according to good working practices, avoiding to disperse the product in the environment. Notify the competent authorities if the product has reached water courses or if it has contaminated the soil or vegetation.

12.1. Toxicity.

Information not available.

12.2. Persistence and degradability.

Information not available.

12.3. Bioaccumulation potential.

Information not available.

12.4. Mobility in soil.

Information not available.

12.5. Results of PBT and vPvB assessment.

Based on available data, the product does not contain PBT or vPvB substances in percentage greater than 0.1%.

12.6. Other adverse effects.

Information not available.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse if possible. The residues of the product as such are to be considered special non-hazardous waste.

Disposal must be entrusted to an authorized waste management company, in compliance with national and possibly local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be sent for recovery or disposal in compliance with national waste management regulations.

SECTION 14. Transport information

The product is not to be considered dangerous pursuant to the provisions in force on the transport of dangerous goods by road (A.D.R.), by rail (RID), by sea (IMDG Code) and by air (IATA).

14.1. UN number.

Not applicable.

14.2. UN proper shipping name.

Not applicable.

14.3. Transport hazard classes.

Not applicable.

14.4. Packing group.

Not applicable.

14.5. Environmental hazards.

Not applicable.

14.6. Special precautions for users.

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code.

Not relevant information.

SECTION 15. Regulatory information

15.1. Health, safety and environmental legislation and regulations specific to the substance or mixture.

Seveso Category - Directive 2012/18 / EC:

Restrictions relating to the product, or the substances contained according to Annex XVII Regulation (EC) 1907/2006.
None.

Substances in the Candidate List (Art. 59 REACH).

Based on available data, the product does not contain SVHC substances in percentage greater than 0.1%.

Substances subject to authorization (Annex XIV REACH).

None.

Substances subject to export notification obligation Reg. (EC) 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Sanitary checks.

Information not available.

15.2. Chemical safety assessment.

A chemical safety assessment has not been developed for the mixture and the substances it contains.

SECTION 16. Other information

Text of hazard (H) indications mentioned in sections 2-3 of the sheet:

Acute Tox. 4 Acute toxicity, category 4

H302 Harmful if swallowed.

EUH210 Safety data sheet available on request.

LEGEND:

- ADR: European agreement for the transport of dangerous goods by road
- CAS NUMBER: Number of the Chemical Abstract Service
- EC50: Concentration affecting 50% of the population under test
- CE NUMBER: Identification number in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived no effect level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System for Classification and Labeling of Chemicals
- IATA DGR: Regulations for the transport of dangerous goods of the International Air Transport Association
- IC50: Concentration of immobilization of 50% of the population subject to testing
- IMDG: International maritime code for the transport of dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identification number in Annex VI of the CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- OEL: Occupational exposure level
- PBT: Persistent, bioaccumulating and toxic according to REACH
- PEC: Predicted environmental concentration
- PEL: Predictable level of exposure
- PNEC: Predicted No Effect Concentration
- REACH: EC Regulation 1907/2006
- RID: Regulations for the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that must not be exceeded during any moment of occupational exposure.
- TWA STEL: Short term exposure limit
- TWA: Weighted average exposure limit
- VOC: Volatile organic compound

- vPvB: Very persistent and very bioaccumulating according to REACH
- WGK: Water hazard class (Germany).

GENERAL BIBLIOGRAPHY:

1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
 2. Regulation (EC) 1272/2008 of the European Parliament (CLP)
 3. Regulation (EU) 790/2009 of the European Parliament (I Atp. CLP)
 4. Regulation (EU) 2015/830 of the European Parliament
 5. Regulation (EU) 286/2011 of the European Parliament (II Atp. CLP)
 6. Regulation (EU) 618/2012 of the European Parliament (III Atp. CLP)
 7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP)
 8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)
 9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)
 10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)
 11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)
 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
 13. Regulation (EU) 2017/776 (X Atp. CLP)
 14. Regulation (EU) 2018/669 (XI Atp. CLP)
 15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
 16. Regulation (EU) 2019/521 (XII Atp. CLP)
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA Agency website
 - Database of SDS models of chemical substances - Ministry of Health and National Institute of Health

Note for the user:

The information contained in this sheet is based on the knowledge available to us at the date of the latest version. The user must ensure the suitability and completeness of the information in relation to the specific use of the product.

This document should not be construed as a guarantee of any specific property of the product.

Since the use of the product does not fall under our direct control, the user is obliged to observe the laws and regulations in force regarding hygiene and safety under his own responsibility. No responsibility is assumed for improper use.

Provide adequate training to personnel assigned to the use of chemicals.

The classification of the product is based on the calculation methods set out in Annex I of CLP, unless otherwise indicated in sections 11 and 12. The methods for evaluating the chemical-physical properties are reported in section 9.

Changes from the previous revision

Changes have been made to the following sections:

01/02/03/04/08/09/11/15/16.