

Safety data sheet

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

1.1. Product identifier

Product name **IMAPUR 2900**

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

Intended use **Solvent-based aromatic polyurethane resin**

1.3. Details of the supplier of the safety data sheet

Name **IMA S.R.L.**
Full address **Via Segrè, 23**
District and Country **27036 Mortara PV**
Italia
Tel. **0039.0384 29.73.11**
Fax **0039.0384 29.67.32**

e-mail address of the competent person responsible for the Safety Data Sheet **RD.lab@imadelta.com**

1.4. Emergency telephone number

For urgent inquiries refer to **0039.0384/297311 (orario d'ufficio)**
0039.0384/297311 (office hours)

CAVp "Osp. Pediatrico Bambino Gesù" Roma Piazza Sant'Onofrio, 4 00165 06 68593726

Az. Osp. Univ. Foggia Foggia V.le Luigi Pinto, 1 71122 0881-732326

Az. Osp. "A. Cardarelli" Napoli Via A. Cardarelli, 9 80131 081-7472870

CAV Policlinico "Umberto I" Roma V.le del Policlinico, 155 161 06-49978000

CAV Policlinico "A. Gemelli" Roma Largo Agostino Gemelli, 8 168 06-3054343

Az. Osp. "Careggi" U.O. Tossicologia Medica Firenze Largo Brambilla, 3 50134 055-7947819

CAV Centro Nazionale di Informazione Tossicologica Pavia Via Salvatore Maugeri, 10 27100 0382-24444

Osp. Niguarda Ca' Granda Milano Piazza Ospedale Maggiore,3 20162 02-66101029

Azienda Ospedaliera Papa Giovanni XXII Bergamo Piazza OMS, 1 24127 800883300

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Reproductive toxicity, category 1B	H360D	May damage the unborn child.
Acute toxicity, category 4	H312+H332	Harmful in contact with skin or if inhaled.
Eye irritation, category 2	H319	Causes serious eye irritation.

SECTION 2. Hazards identification ... / >>

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: Danger

Hazard statements:

H226	Flammable liquid and vapour.
H360D	May damage the unborn child.
H312+H332	Harmful in contact with skin or if inhaled.
H319	Causes serious eye irritation.
	Restricted to professional users.

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 / clothing and eye / face protection.
P304+P340	IF INHALED: remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice / attention.
P370+P378	In case of fire: use foam, CO2 to extinguish.

Contains: DIMETHYL FORMAMIDE

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification	Conc. %	Classification 1272/2008 (CLP)
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DIMETHYL FORMAMIDE

CAS	68-12-2	61 - 66	Flam. Liq. 3 H226, Repr. 1B H360D, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Irrit. 2 H319, Nota E
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EC 200-679-5

INDEX 616-001-00-X

Reg. no. 01-2119475605-32-xxxx

Note: Upper limit is not included into the range

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

SECTION 4. First aid measures ... / >>

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Send away individuals who are not suitably equipped. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10.

Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

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

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GRB	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
	TLV-ACGIH	ACGIH 2014

DIMETHYL FORMAMIDE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		30	10			
AGW	DEU	15	5	30	10	SKIN
MAK	DEU	15	5	30	10	SKIN
VLA	ESP	15	5	30	10	SKIN
VLEP	FRA	15	5	30	10	SKIN
WEL	GRB	15	5	30	10	SKIN
TLV	ITA	15	5	30	10	SKIN
NDS	POL	15		30		

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Viscous liquid
Colour	Colourless or slightly yellow
Odour	Characteristic
Odour threshold	Not available
pH	Not applicable
Melting point / freezing point	Not available
Initial boiling point	153 °C
Boiling range	151-155°C
Flash point	> 23 °C
Evaporation Rate	0,20
Flammability (solid, gas)	Not applicable
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	Not available
Solubility	Insoluble in water
Partition coefficient: n-octanol/water	999
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	80.000 - 120.000 mPa.s
Explosive properties	Not applicable
Oxidising properties	Not available

9.2. Other information

VOC (Directive 2010/75/EC) :	64,89%
VOC (volatile carbon) :	31,96%

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.
DIMETHYL FORMAMIDE: decomposes on contact with flames and hot surfaces to generate toxic fumes.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.
DIMETHYL FORMAMIDE: risk of explosion on contact with: alkaline metals, strong oxidising agents, bromine, chlorine, triethyl aluminium, alkaline nitrides. Can react violently with: reducing agents, halogens, nitrates, metal and non-metal oxides, halogenated hydrocarbons. Forms explosive mixtures with air when warm.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.
DIMETHYL FORMAMIDE: avoid exposure to sources of heat and naked flames.

10.5. Incompatible materials

DIMETHYL FORMAMIDE: oxidising substances, halogenated hydrocarbons, inorganic nitrates, triethyl aluminium, bromine, chlorine and iron.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.
DIMETHYL FORMAMIDE: nitric oxides, dimethylamine, hydrogen cyanide.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

SECTION 11. Toxicological information ... / >>

11.1. Information on toxicological effects

DAMAGE/IRRITATION OF EYE: serious eye damage REPRODUCTION TOXICITY: toxic for reproduction (d).

This product has a teratogenic effect on human beings; it has toxic effects on fetus development. There is sufficient evidence to make us believe that the substance contained in the product is likely to affect the embryo-fetal development.

Acute effects: inhalation and cutaneous absorption of this product are harmful. This product may irritate mucosas, the upper respiratory tract, and eyes. Exposure symptoms may include: stinging and irritated eyes, mouth, nose, throat; cough, respiratory disorders, dizziness, headache, nausea and sickness. In the most serious cases, inhalation of this product may cause larynx and bronchial tube edema and irritation, chemical pneumonia and pulmonary edema. Upon contact with skin, this product may irritate it, causing an increase in skin temperature, swelling and itchiness. Ingestion of even small amounts of this product may cause health problems (stomach pain, nausea, sickness, diarrhoea).

Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation. Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

DIMETHYL FORMAMIDE

LD50 (Oral) 2.800 mg/kg Rat

LC50 (Inhalation) >5,9 mg/l/4h Rat

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

Information not available

12.2. Persistence and degradability

The product is not biologically decomposable.

DIMETHYL FORMAMIDE

Solubility in water 1000 - 10000 mg/l

Entirely biodegradable

12.3. Bioaccumulative potential

DIMETHYL FORMAMIDE

Partition coefficient: n-octanol/water 0,850000-

BCF 0,3

12.4. Mobility in soil

DIMETHYL FORMAMIDE

Partition coefficient: soil/water <10

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number

ADR / RID, IMDG, IATA: 1866

14.2. UN proper shipping name

ADR / RID: Resin solution
IMDG: Resin solution
IATA: Resin solution

14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3



IMDG: Class: 3 Label: 3



IATA: Class: 3 Label: 3



14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 30 Special Provision: 640E	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo: Pass.: Special Instructions:	Maximum quantity: 220 L Maximum quantity: 60 L A3	Packaging instructions: 366 Packaging instructions: 355

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC:
P5c

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

<u>Product</u>	
Point	3-40
<u>Contained substance</u>	
Point	30 DIMETHYL FORMAMIDE

Substances in Candidate List (Art. 59 REACH)

DIMETHYL FORMAMIDE

Substances subject to authorisation (Annex XIV REACH)

SECTION 15. Regulatory information ... / >>

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information

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

Flam. Liq. 3	Flammable liquid, category 3
Repr. 1B	Reproductive toxicity, category 1B
Acute Tox. 4	Acute toxicity, category 4
Eye Irrit. 2	Eye irritation, category 2
H226	Flammable liquid and vapour.
H360D	May damage the unborn child.
H312	Harmful in contact with skin.
H312+H332	Harmful in contact with skin or if inhaled.
H332	Harmful if inhaled.
H319	Causes serious eye irritation.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

SECTION 16. Other information ... / >>

GENERAL BIBLIOGRAPHY

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
2. Regulation (EU) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament

- 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
- ECHA website

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:

The following sections were modified:

01/02/03/04/05/06/07/08/09/10/11/12/13/14/15/16