



**SAFETY DATA SHEET**  
**PROPYLENE FOR**  
**POLYMERIZATION**

Date of issue: 30.07.2004

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replaces: 01.12.2010 – 6<sup>th</sup> issue

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

1.1 Product identifier

The table contains identifiers (names and identification numbers) of the product which is marketed under the following business name:

**PROPYLENE FOR POLYMERIZATION**

DATA SOURCE FOR IDENTIFICATION	IDENTIFIERS	
	NAME OF SUBSTANCE	IDENTIFICATION NO.
Registration in accordance with REACH Regulation	<b>Name on registration:</b> Propene	<b>registration no.:</b> 01-2119447103-50-0027
List of harmonized classifications (Annex VI of CLP)	<b>Name in the list:</b> propen, propylen Propylene, Propene	<b>index no.:</b> 601-011-00-9
ECHA database of classifications and labels	<b>Name listed in the database:</b> database not yet available	<b>identification no.:</b> database not yet available
Other sources	<b>International chemical name:</b> Propylene	<b>CAS:</b> 115-07-1 <b>EC:</b> 204-062-1

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

2.1.1 Identified use

Monomer for the production of polymers, intermediate product for the production of chemical substances, technical gas for welding, cutting, etc.

2.1.2 Non-recommended use

The registration documentation contains no non-recommended use.

1.3 Details of the supplier of the safety data sheet

- UNIPETROL RPA, s.r.o., Záluží 1, 436 70 Litvínov, Czech Republic

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- Marketing C.E.O.:

☎: +420 476 164 281 fax: +420 476 163 691

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- Sales administrator:

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- Safety sheet processor

[ludmila.krejcikova@unipetrol.cz](mailto:ludmila.krejcikova@unipetrol.cz)

1.4 Emergency telephone number

- UNIPETROL RPA, s.r.o.

☎: +420 476 163 111 (non-stop)

☎: +420 476 162 111 (non-stop)

- MINISTRY OF HEALTH CENTRE

Toxicological Information Center (TIC)

☎: +420 224 919 293 (non-stop)

Na bojišti 1, 128 08 Prague 2, Czech Republic

☎: +420 224 915 402 (non-stop)

e-mail: [tis@mbox.cesnet.cz](mailto:tis@mbox.cesnet.cz)

fax: +420 224 914 570

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of substance or mixture

The product is harmonically classified on the EU level as dangerous based on its entry, classification and labelling in part 3 of Annex VI of Regulation (EC) No 1272/2008 CLP.

#### 2.1.1 CLP (Regulation (EC) No1272/2008 CLP):

FLAMMABLE GAS (CATEGORY 1)  
 GASES UNDER PRESSURE (LIQUEFIED GAS)

<b>Flam. Gas 1, H 220</b>
<b>Press. gas (Liquefied gas), H 280</b>



#### 2.1.2 DSD / DPD (directive) 67/548/EHS / directive 1999/45/ES):

EXTREMELY FLAMMABLE

<b>F+; R 12</b>
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*Note: Full wording of H-, EUH- and R-phrases listed in Section 16*

### 2.2 Label elements

<i>product identifiers</i>	<b>PROPYLENE FOR POLYMERIZATION</b> PROPYLENE / PROPENE index number: 601-011-00-9
<i>hazard pictogram(s)</i>	  GHS02                      GHS04
<i>signal word</i>	DANGER
<i>hazard statements (H-, EUR-phrases)</i>	H220 H280 Extremely flammable gas. Contains gas under pressure; may explode if heated.
<i>precautionary statements (P-phrases)</i>	P210 P243 P377 P381 P410+P403 Keep away from heat/sparks/open flames/hot surfaces – No smoking. Take precautionary measures against static discharge. Leaking gas fire – do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. Protect from sunlight. Store in a well ventilated place.
UNIPETROL RPA, s.r.o. Záluží 1, 436 70 Litvínov, Czech Republic ☎: +420 476 161 111, +420 476 162 111, +420 476 163 111	

### 2.3 Other hazards

The product is easily flammable liquefied gas. Liquefied product vaporizes quickly and may cause frostbites. Leaked gas spreads to long distances and creates explosive mixtures with air; after the product initiation it may cause fire or explosion even far from the leak source. Ethylene displaces oxygen in the air and may cause suffocation.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

## 3.1 Substances

name of substance :	Propylene (for other names see Subsection 1.1)	
concentration [% of weight] :	min. 99,8	
index no. (index) :	601-011-00-9	
CAS :	115-07-1	
ES :	204-062-1	
<i>CONTAMINANTS</i>	<i>NEME:</i>	<i>IDENTIFIER:</i>
<i>the product does not contain any impurities, stabilizing additives or other substances which would affect its classification</i>		

**SECTION 4: FIRST AID MEASURES**

## 4.1 Description of first aid measures

## 4.1.1 General instructions

Ensure the operation of vital functions. In case of danger of loss of consciousness, move the patient into the stabilized position. Never give anything orally to unconscious individuals.

## 4.1.2 In case of inhalation

If possible with respect to your own safety, move the victim to fresh air and make sure they do not get cold. Ensure specialized medical help.

## 4.1.3 In case of skin contact

In case of frostbite do not pull off adherent clothing and wash the place with water (not warm). Do not rub the affected area, only cover it with sterile bandage or clean piece of cloth. Ensure specialized medical help.

## 4.1.4 In case of eye contact

Immediately start washing eyes while wide open under flowing tepid water, continue for at least 15 minutes. If the patient has contact lenses, remove them before washing eyes. Ensure specialized medical help immediately because freezing may cause serious eye damage.

## 4.1.5 In case if swallowed

Consumption is not a probable way of exposure. Contact with liquefied gas may cause frostbites of lips and mouth. In such case wash your mouth with luke water and ensure specialized medical help immediately.

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

Lack of oxygen may cause exhaustion, drowsiness, weariness, dizziness, nausea, vomiting, loss of coordination, problems with attention and reasoning, and general confusion. The victim may not even notice he is suffocating, and may fall unconscious and suffocate quickly without warning. In case of frostbite the affected areas appear pale, cold and insensitive, and may later change to red, swell, tingle, burn and hurt.

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

Immediate medical help is required in case of inhalation or eye contact with liquefied gas.

**SECTION 5: FIREFIGHTING MEASURES**

## 5.1 Extinguishing media

Appropriate extinguishing media: low expansion foam, spray or water fog.

Inappropriate extinguishing media: direct water stream.

Extinguishing small fire: dry-powder or carbon dioxide (CO<sub>2</sub>) extinguisher, dry sand or extinguishing foam.

#### 5.2 Special hazards arising from the substance or mixture

Do not fight the fire until the source of its leak is removed. If this is not possible, let the fire burn out and only use water to cool the tanks near the fire. Otherwise there is a danger of a fast reaction or explosion. The gases may spread to significant distances and cause subsequent combustion. The gas is heavier than air; it amasses near the ground and in enclosed spaces and may cause explosion or suffocation. Tanks containing the product can explode due to heat. Burning may cause the creation of toxic fumes containing carbon monoxide and carbon dioxide.

#### 5.3 Advice for fire fighters

Minimize the penetration of extinguishing medium contaminated by the substance into the sewage, surface or underground waters or into the soil. There is a danger of explosion and subsequent fire in case of a leak into the sewage.

Use water spray to keep the containers cool in order to prevent an explosion caused by the heat.

Do not use foam and water at the same time because water dissolves the foam.

Protective equipment for fire fighters: full protective gear and self-contained close-circuit breathing apparatus.

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Enclose the place and prevent the access to the area in danger. Remain on the windward side. There is a danger of fire in case of accidental release of this substance, therefore remove all possible ignition sources, do not smoke and do not manipulate with open fire. If possible, ensure a sufficient ventilation of enclosed spaces. Prevent contact with the substance and its vapors. Use proper personal protective equipment (as indicated in Subsection 8.2) when removing the effects of the emergency event/accident. Evacuate people from the whole area in danger for large accidents. There is a danger of suffocation and in case of initiation also of explosion in areas below ground and in enclosed areas (including sewage).

#### 6.2 Environment precautions

Prevent further leaking and enclose the leaking place. In the case of leak of liquefied gas, prevent its escape into the sewage system or into surface and underground water by closing sewage entrances.

#### 6.3 Methods and material for containment and cleaning up

Leak of liquefied gas will cause quick evaporation with no efficient way of stopping it. Use a water shower to reduce the amount of gases in the air. Increase the intensity of air ventilation at the site of the leak, especially if it occurred in an enclosed area, and monitor the concentration of gases in the air.

#### 6.4 Reference to other sections

For recommended personal protective equipment see Subsection 8.2 („Limiting exposure“).

For recommended waste disposal see Section 13 („Disposal considerations“).

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### SECTION 7: HANDLING AND STORAGE

#### 7.1 Safe handling instructions

Adhere to all fire safety precautions (no smoking, no open fire, removal of all possible combustion sources) and stay in well-ventilated areas when manipulating with the substance and with empty tanks (may contain residue). Do not perform activities such as welding, cutting, grinding etc. near casings (even empty ones). Prevent bolts of static electricity. Only use in technological plants which are made of suitable construction materials, can withstand the appropriate pressure and are equipped with a protective mechanism which would prevent back-flow. Ensure that the whole gas system was inspected for possible leaks before use. Use recommended personal protective measures and follow all instructions to prevent possible contact of the substance with skin, eyes and possible inhalation. When entering enclosed or non-ventilated areas always use airway protective measures.

General sanitary precautions: Please keep the rules of personal hygiene. Take off contaminated pieces of clothing. Do not eat, drink or smoke during work! Wash your hands and exposed parts of body thoroughly with soap and water after work and before meal and possibly treat with suitable reparation lotion. Do not wear contaminated clothing, shoes or protective equipment in the catering area.

7.2 Conditions for safe storage, including any incompatibilities

Storage must adhere to the fire safety requirements on buildings and electric equipment must adhere to valid regulations. Store in cool, well-ventilated places with efficient suction from all heat and combustion sources. Protect from direct sunlight. Storage containers must be closed, properly labeled and grounded. Do not store near incompatible materials, such as oxidizers.

7.3 Specific end use(s)

The substance is not designated for specific use which would be adjusted by certain special recommendations. It is necessary to adhere to the instructions listed in Subsections 7.1 and 7.2 during manipulation and storage.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

8.1 Control parameters

Czech Republic (government Regulation No361/2007 Coll.)	PEL [mg.m <sup>-3</sup> ]	NPK-P [mg.m <sup>-3</sup> ]
name : propylene	<b>Limit values for the substances are not determined</b>	
index no. : 601-011-00-9		
CAS : 115-07-1		
ES : 204-062-1		

PEL : permissible exposure limit of the chemical substance in the air

NPK-P : maximum permissible concentration of the chemical substance in the air

	8-hour limit [mg.m <sup>-3</sup> ]	short time limit [mg.m <sup>-3</sup> ]
European Union (Directive) 2000/39/ES)	not determined	not determined
Germany	not determined	not determined
poland	not determined	not determined
Slovakia	not determined	not determined
France	not determined	not determined

8-hour limit: measured or calculated in relation to the reference period of eight hours as a time-weighted average

short time limit: limit value that should not be exceeded during exposure corresponding to 15 minutes

Recommended procedure for monitoring concentrations in the work environment: gas chromatography (GC) with a flame ionizing detector (FID) or a mass spectrometer (MS) in accordance with technical norms ČSN EN 689 and ČSN EN 482.

8.2 Exposure controls

Technical protective measures to prevent exposure of people and the environment

Protective measures against exposure must be ensured by strictly keeping the substance under control by using process and control technologies, which reduce emissions and subsequent exposure with the goal of preventing the substance from entering the air and water systems as well as the soil, and of preventing possible human exposure. The areas where the substance is stored and manipulated must be equipped with impermeable floors and retaining tanks in case of emergency leaks. It is necessary to ensure global as well as local ventilation and efficient suction.

**Individual protective measures**

In case of danger of increased exposure due to product manipulation or due to other events, such as an accident or emergency, employees must have personal protective measures (PPM) available for the protection of airways, eyes, hands and skin, corresponding to the nature of the performed activities. Suitable protection for airways must also be available where it is not technically possible to ensure the adherence of exposition limits designated for the work environment or ensure that exposure via airways will not affect the health of people. During non-stop use of these measures during permanent work, it is necessary to include safety breaks if the nature of the PPM requires them. All PPM need to be kept in usable condition and damaged or contaminated ones need to be immediately replaced.

**RECOMMENDED PERSONAL PROTECTIVE MEASURES (PPM):**

- *protection of airways:* isolating breathing device
- *protection of eye / face:* protective glasses or protective shield
- *protection of skin - hands* protective gloves against cold and possible frostbite  
the follow materials protect from the chemical effects of the substance

	<i>glove material</i>	<i>layer width</i>	<i>time of penetration</i>
general work activity (possibility of contamination)	nitril	0,4 mm	60 minutes
cleaning after leaks / emergencies	Viton	0,7 mm	480 minutes

- *protection of other body parts:* antistatic non-flammable protective clothing, antistatic shoes
- *heat danger:* not relevant for the identified manner of use

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**
**9.1 Information on basic physical and chemical properties**

PROPERTY	UNIT	VALUE	NOTE
appearance		colorless gas	
odour		weak aromatic	
odour threshold	[mg.m <sup>-3</sup> ]	40 to 100	HSDB
pH value		not relevant	
melting / freezing point	[°C]	-185	
initial boiling point / boiling range	[°C]	-48	
flash point		not relevant for gases	
evaporation rate		not relevant for gases	
flammability	[% vol]	2 11	flammability limits: lower upper
upper explosion limit	[% vol]	10,1	HSDB
lower explosion limit	[% vol]	2,4	HSDB
vapour pressure	mm Hg	8690	at 25°C HSDB
vapour density	air=1	1,4	
relative density		not relevant for gases	
solubility	[mg.l <sup>-1</sup> ]	200	at 25°C
partition coefficient: n-octanol/water	[log Kow]	1,77	
auto-ignition temperature	[°C]	455	

PROPERTY	UNIT	VALUE	NOTE
decomposition temperature		does not break down at usual temperatures of use	
dynamic viscosity	[μP]	83,4	at 16,7°C HSDB
explosive properties		substance is not explosive	
oxidising properties		none	

## 9.2 Other information

Not required.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No risk assuming adherence to the conditions for manipulation and storage listed in Section 7.

### 10.2 Chemical stability

The product is chemically stable assuming storage and manipulation under the conditions listed in Section 7.

### 10.3 Possibility of hazardous reactions

Dangerous reactions occur after contact with oxidizers.

### 10.4 Conditions to avoid

Ignition sources (including static energy), high temperature, sunshine.

### 10.5 Incompatible materials

Oxidizers.

### 10.6 Hazardous decomposition products

Carbon monoxide and carbon dioxide might be produced during heat decomposition at high temperatures.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### 11.1.1 Substance

HAZARD CLASS	EFFECT ON HEALTH	JUSTIFICATION
Acute toxicity	currently available information indicate that it is not necessary to classify the substance for its acute toxic effects on health when inhaled, consumed or in case of penetration of the substance <i>Acute toxicity</i> <i>oral: not relevant for gases</i> <i>dermal: not relevant for gases</i> <i>inhalation: discovered LC50 values exceed concentrations for the classification of the substance as acutely harmful for human health</i>	data from registration documentation
Skin corrosion/irritation	currently available information indicates that it is not necessary to	currently there are no available data proving

HAZARD CLASS	EFFECT ON HEALTH	JUSTIFICATION
	classify the substance as caustic or irritating for the skin <i>not relevant for gases</i> <i>not relevant for gases</i> <i>not relevant for gases</i> <i>not relevant for gases</i>	that the substance has the given property  data from registration documentation: <i>data available for humans and animals</i> <i>examination of acid or alkaline reserve</i> <i>in vitro study</i> <i>in vivo study</i>
Serious eye damage/irritation	currently available information indicates that it is not necessary to classify the substance as causing serious eye damage or irritation <i>not relevant for gases</i> <i>not relevant for gases</i> <i>not relevant for gases</i> <i>not relevant for gases</i>	currently there are no available data proving that the substance has the given property  data from registration documentation: <i>data available for humans and animals</i> <i>examination of acid or alkaline reserve</i> <i>in vitro study</i> <i>in vivo study</i>
Respiratory or skin sensitisation	based on available data the substance does not cause allergic reaction and therefore it does not need to be classified as sensitizing <i>No entries in available literature indicate that the product could cause allergic reactions</i> <i>not relevant for gases</i>	data from registration documentation: <i>data available for humans and animals</i>  <i>in vivo study</i>
Germ cell mutagenicity	currently available information indicates that it is not necessary to classify the substance as causing hereditary genetic changes <i>no genotoxic properties</i> <i>no genotoxic properties</i>	data from registration documentation: <i>in vitro study</i> <i>in vivo study</i>
Carcinogenicity	currently available information indicates that it is not necessary to classify the substance as causing cancer <i>studies listed in the registration documentation indicate that no carcinogenic properties were demonstrated in the substance</i>	data from registration documentation: <i>experimental study</i>
Reproductive toxicity	based on available information there is no need to classify the substance for adverse effects on fertility or fetus development <i>no detrimental reproductive or developmental effects were recorded</i>	data from registration documentation: <i>fertility</i> <i>prenatal developmental toxicity</i>
Specific target organ toxicity – single exposure	based on available information there is no need to classify the substance for its capability to damage human organs during a single exposure <i>no harmful effect were found during tests performed with a concentration of 10 000 ppm (17</i>	data from registration documentation: <i>subacute and subchronic toxicity</i>

HAZARD CLASS	EFFECT ON HEALTH	JUSTIFICATION
	<i>200 mg.m-3)</i>	
Specific target organ toxicity – repeated exposure	currently available information indicates that it is not necessary to classify the substance as damaging human organs at repeated exposure <i>low subchronic toxicity value discovered on inhalation</i>	currently there are no available data proving that the substance has the given property  data from registration documentation: <i>subacute and subchronic toxicity</i>
Aspiration hazard	currently available information indicates that consumption or inhalation into airways does not cause lungs damage or death	currently there are no available data proving that the substance has the given property

#### 11.1.2 Information on likely routes of exposure

Inhalation is the most significant type of exposure.

#### 11.1.3 Symptoms and effects (acute, delayed and chronic after short-time and long-time exposure)

The product displaces oxygen. Lack of oxygen may cause exhaustion, drowsiness, weariness, dizziness, nausea, vomiting, loss of coordination, problems with attention and reasoning, and general confusion. The victim may not even notice he is suffocating, and may fall unconscious and suffocate quickly without warning. Frostbites may develop from contact with cooled liquefied gas. Frostbitten areas appear pale, cold and insensitive, and may later change to red, swell, tingle, burn and hurt.

#### 11.1.4 Interactive effects

There are no interactions for identified use.

#### 11.1.5 Toxicokinetics

After inhalation exposure 7% of the product is metabolized, the rest of the product is exhaled in an unmodified form.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### AQUATIC TOXICITY:

Propylene is under normal pressure and temperature a gas and when testing toxicity it is technically difficult to keep the determined concentration in water. The results of such tests then may not be relevant. The tests were therefore replaced by the (Q)SAR mathematical model method.

Subacute toxicity on invertebrates: EC50, 48 h: 28,2 mg.l<sup>-1</sup> (*Daphnia*) / (Q)SAR METHOD/

Study of water plants growth inhibition: EC50, 96 h: 12,1 mg.l<sup>-1</sup> / (Q)SAR METHOD/

Subacute toxicity on fish: LC50, 96 h: 51,7 mg.l<sup>-1</sup> / (Q)SAR METHOD/

Testing inhibition of activated sludge respiration: the test is not necessary since microbial toxicity is not probably (the product is a gas and will segment to the air at normal temperature and pressure)

## 12.2 Persistence and degradability

Biological degradability: due to the fact that propylene forms a gas under normal pressures and temperatures, standard biodegradability tests are technically difficult to perform and the results might not be relevant. The (Q)SAR method discovered that propylene is easily biologically degradable.

Abiotic degradability:

- hydrolysis as a function of pH: the product is unaffected by hydrolysis
- photolysis: the product is unaffected by photolysis
- atmospheric oxidation: easy decomposition is assumed via indirect photolysis in the air

## 12.3 Bioaccumulative potential

With regards to the fact that the value of the distribution coefficient n-octanol/water (log Kow) is lower than 3, no bioaccumulation of the product is expected.

## 12.4 Mobility in soil

With regards to low value of the distribution coefficient n-octane/water (low Kow < 3) no sorption of the product into sediment or soil is expected.

## 12.5 Results of PBT and vPvB assessment

The product does not fulfill the criteria of persistence, bioaccumulation and toxicity, or the criteria of high persistence and high bioaccumulation in accordance with Annex XIII of EC Regulation No 1907/2006 REACH, and so is not identified as a PBT substance (Persistent, Bioaccumulative, Toxic) or a vPvB (very Persistent, very Bioaccumulative) substance.

## 12.6 Other adverse effects

The product is not considered a dangerous detrimental substance in accordance with Annex 1 of water Act No 254/2001.

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## SECTION 13: DISPOSAL CONSIDERATION

### 13.1 Waste treatment methods

If the product becomes waste, e.g. due to an accident or emergency, it is necessary to adhere to regulations valid in the EU as well as locally and nationally.

#### 13.1.1 Recommended waste classification according to Decree No 381/2001 Coll. (Waste catalogue)

Gases which are not delivered in pressure tanks cannot be classified as waste or assigned a number from the catalogue.

#### 13.1.2 Recommended methods of waste disposal

Burn the gas with a suitable burner equipped with protection against flame blow-back.

#### 13.1.3 Recommended methods of contaminated containers disposal

Not relevant. The product is not packed, it is transported by truck cisterns.

#### 13.1.4 Considerations for limiting exposure when handling wastes

Never release the product into an environment where an explosive mixture with air could form. Do not flush leaked cooled liquefied product during an emergency event or accident into sewage. Proceed in accordance with instructions provided in Section 6 („Accidental release measures“) and in Subsection 8.2 („Limiting exposure“) and adhere to all valid legal regulations for the protection of people, air and water.

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**SECTION 14: TRANSPORT INFORMATION**

Information on transport classification are in accordance with the following UN Model Regulations:

European Agreement concerning the International Carriage of Dangerous Goods (ADR),  
International Carriage of Dangerous Goods by Rail (RID).

- 14.1 UN number: 1077
- 14.2 UN proper shipping name: PROPENE
- 14.3 Transport hazard class(es): 2
- 14.4 Packing group: not listed
- 14.5 Environmental hazards: the product is not hazardous for the environment in accordance with criteria stated in the UN Model Regulations
- 14.6 Special precautions for user: none
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: the product is not intended to be carried in bulk in accordance with the International Maritime Organization (IMO) documents
- 14.8 Other information
- Hazard identification number: 23
- Classification code: 2F
- Safety sign: 2.1 + (13)\*
- Note: \* Safety sign for displacement „MOVE WITH CARE“ (only valid for RID)

**SECTION 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1 European Union**

Regulation (EC) No 1907/2006 (REACH) of the European Parliament and of the Council, as amended  
REGISTRATION (TITLE II OF REACH REGULATION)

The product was fully registered as a substance.

AUTHORIZATION (TITLE VII OF REACH REGULATION)

The product is not listed in the list of substances in Annex XIV of EC Regulation No 1907/2006 REACH, and so no licensing obligation applies

RESTRICTION (TITLE VIII OF REACH REGULATION)

It is necessary to adhere to the limitations listed in list no. 40 of Annex XVII of EC Regulation No 1907/2006 REACH when producing, using and marketing this product.

Regulation (EC) No 1272/2008 (CLP) of the European Parliament and of the Council, as amended

The product has been classified in accordance with the abovementioned regulation. Obligations related to packing and labelling the package of hazardous chemical substance do not apply to the product with regards to the fact that it is not packed upon entering the market.

Regulation (EC) No 689/2008 of the European Parliament and of the Council concerning the export and import of dangerous chemicals, as amended

The product does not adhere to any special regulations for export and import.

Directive 2006/12/EC of the European Parliament and of the Council on waste, as amended

Implemented into Act No 185/2001 Coll. on waste.

Council Directive No 96/82/EC on the control of major-accident hazards involving dangerous substances, as amended

Implemented into Act No 59/2006 Coll. on the prevention of serious accidents

### 15.1.2 The Czech Republic

Act No 356/2003 Coll. on chemical substances and preparations, as amended

Act No 258/2000 Coll. on protection of public health, as amended

Act No 254/2001 Coll., on waters, as amended

Act No 86/2002 Coll., on the protection of the air, as amended

Act No 185/2001 Coll., on waste, as amended

Decree No 381/2001 Coll., in which the Waste Catalogue is stated, as amended

Government Regulation No 361/2007 Coll., determining conditions for occupational health protection, as amended

Act No 59/2006 Coll., on the prevention of serious accidents, as amended

Decree No 256/2006 Coll., on details of the serious accident prevention system, as amended

### 15.2 Chemical safety assessment

Chemical safety assessment was performed. The substance fulfils the criteria for classification as dangerous in accordance with directive 67/548/EUH and EC Regulation No 1272/2008 CLP. Propylene does not meet the classification criteria for hazardous substance for human health or the environment, is not carcinogenic, mutagenic or toxic for reproduction (CMR) and is not persistent, bioaccumulating and toxic (PBT) or very persistent and very bioaccumulating (vPvB).

## SECTION 16: OTHER INFORMATION

### Changes made at revision

01.12.2006: Editing information in chapters 1, 2, 8, 12.5, 13 and 16

01.03.2007: Editing information in chapters 1a 16

01.06.2007: Complete revision of the document in relation to the Regulation (EC) No 1907/2006 of the European Parliament and of the Council

01.12.2009: Editing information in chapters 1, 2.1, 8.1, 15, 16 and „Proclamation“

01.12.2010: Editing information in chapters 1 (registration number), 2 (classification and labelling according to CLP), 16 and added annex

01.08.2011: Complete revision of the document in relation to the updating of Annex II of Regulation (EC) No 1907/2006 REACH in accordance with Annex I of Commission Regulation (EU) No 453/2010

### Abbreviations used in the text

CAS number Registration number assigned to the substance by the Chemical Abstracts Service of the American Chemical Society.

EC number Official number of the chemical substance in the European Union: EINECS (European Inventory of Existing Commercial Substances), or ELINCS (European List of Notified Chemical Substances), or NLP (No longer polymer list).

REACH (Regulation) EU Regulation No 1907/2006 on the Registration, Evaluation and Authorization of Chemicals.

CLP (Regulation) EU Regulation No 1272/2008 on the Classification, Labeling and Packaging of chemical substances and mixtures, which implements the United Nations' Globally Harmonized System into EU legislature.

DSD EU Directive No 67/548/EHS, the Dangerous Substances Directive.

DPD EU Directive No 1999/45/ES, the Dangerous Preparations Directive.

ECHA European Chemicals Agency.

UVCB substances Substances of Unknown or Variable composition, Complex reaction products or Biological materials.

ČSN EN (ISO)	European norm accepted into the Czech technical norms system.
OSN or UN	The United Nations.
IBC	The Intermediate Bulk Container.
MARPOL 73/78	The International Convention for the Prevention of Pollution from Ships of 1978.
(Q)SAR	A theoretical mathematical model, which can be used to obtain the properties of substances based on the relationship between its structure and activity („Quantitative Structure-Activity Relationship“).
HSDB	Hazardous Substances Data Bank.

#### Sources of data used for setting up the safety sheet

Company records of Unipetrol RPA, s.r.o. on the classification of dangerous properties of products Annexes I, IV, VI and VII to EC Regulation No 1272/2008 CLP, as amended  
 Principles for provision of first aid following exposure to chemical substances (doc. MUDr. Daniela Pelclová at al.)  
 Registration documentation for the substance in accordance with EC Regulation No 1907/2006 REACH  
 Decision of ECHA No SUB-D-2114120357-57-01/F on registration in accordance with EC Regulation No 1907/2006 REACH  
 Research data sources (Hazardous Substances Data Bank HSDB, University of Akron Chemical UAKRON, Gestis sanitary limits)

#### Full wording of R-phrases, H-phrases and EUH-phrases listed in SECTIONS 2 and/or 3

R 12	Extremely flammable
H 220	Extremely flammable gas.
H 280	Contains gas under pressure; may explode if heated.

#### Training guidelines


Those who manipulate with the product must be demonstrably informed of its dangerous properties, principles of protecting the environment and health from its harmful effects and principles of first aid (see appropriate provisions of the labor law, as amended).

#### Access to information

According to article 35 of EC Regulation No 1907/2006 Reach, each employer must allow access to information listed in the safety sheet to all workers who use this product or are exposed to its effects during their work, and also to representatives of such workers.

#### Elements of the original labelling of dangerous substance in accordance with DSD Directive 67/548/EHS

**WARNING !!!** Only used informally, to ensure continuity between the former and new labelling of dangerous substances. **THE ELEMENTS LISTED BELOW CAN NO LONGER BE USED TO LABEL THIS PRODUCT !!!** The new labelling must be in accordance with Subsection 2.2.

<i>graphic symbol of danger</i>				
<i>written symbol of danger</i>		<b>F+</b>		
<i>R-phrases</i>	R 12	Extremely flammable		
<i>S-phrases</i>	S 9 S 16 S 33	Keep container in a well-ventilated place Keep away from sources of ignition - No smoking Take precautionary measures against static discharges		



*SAFETY DATA SHEET*  
**PROPYLENE FOR  
POLYMERIZATION**

Date of issue: 30.07.2004

revision: 01.08.2011 – 7<sup>th</sup> issue

replaces: 01.12.2010 – 6<sup>th</sup> issue

Inspection and verification of safety sheet contents

Inspection and verification of the accordance of this document with the requirements of EC Regulation No 1907/2006 REACH and EC Directive No 1272/2008 CLP were performed by an independent specialist – Ing. Oldřich Petira, CSc., an authorized specialist in the fields of chemistry and environmental protection with an emphasis on industrial toxicology and chemical safety of the environment.

**Proclamation:** *Material This Material Safety Data Sheet has been elaborated in accordance with the Regulation (EC) No 1907/2006 REACH. It contains information necessary to ensure safety and protection of health at work and of the environment. This information does not substitute quality specification and should not be construed as any guarantee of suitability for particular applications. The data contained are based on the present state of knowledge and current national legislation. The user is responsible for ensuring the compliance with the relevant regional legislation.*

According to the authorization form on behalf of UNIPETROL RPA,s.r.o. elaborated by:  
Health, Safety, Environment & Quality (HSE&Q) Department, UNIPETROL SERVICES, s.r.o.



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**ANNEX OF MATERIAL SAFETY DATA SHEET**

**EXPOSURE SCENARIOS ACCORDING TO ARTICLE 31 OF REGULATION (EC) NO 1907/2006  
(REACH) OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

The Chemical Safety Report (CSR) presented by the main registrant at the product registration shows that no exposure scenarios need to be processed and annexed to the safety sheet.

Justification: is not carcinogenic, mutagenic or toxic for reproduction (CMR) and is not persistent, bioaccumulating and toxic (PBT) or very persistent and very bioaccumulating (vPvB). This means that there is no danger that would require measures for its solution to be proposed, and the exposure assessment and scenarios for exposure are not required.