



## SAFETY DATA SHEET

# NANOCLOAK™

### Plastic Polymembrane Protection

Pursuant to European Parliament and Council Regulation (EC), No 1907/2006 (REACH) and Commission Regulation (EU) No 453/2010

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## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE

Product identifiers: (PLASTIC POLYMEMBRANE PROTECTION)

Substance/mixture mixture

Number PMO 57

### 1.1. Relevant identified uses of the substance or mixture:

Hydrophobic protection of plastics and solid materials.

## 2. INFORMATION REGARDING THE DANGERS OF THE SUBSTANCE OR PRODUCT

### 2.1. Classification of the substance or mixture

**Classification of the mixture as per ES Regulation 1272/2008**

The mixture is not classified as dangerous as per ES Regulation 1272/2008.

**Classification of the mixture according to 1999/45/ES**

Hazard statement:

F- highly flammable

**R-phrases**

R 11 (F)- highly flammable

**Adverse physicochemical, human health and environmental effects, symptoms associated with inappropriate use and possible misuses**

The mixture is highly flammable.

### 2.2. Label elements

Hazard symbol



F- highly flammable

**R-phrases**

R 10 Highly flammable

**S-phrases**

S 16 Keep away from source of ignition- Smoking prohibited

S 2 Keep away from children

S 7 Keep the container closed

**Hazardous Substance**

Ethanol (Index: 603-002-00-5)

Propan-2-ol (Index: 603-117-00-0)

### 2.3. Other hazards

Not known.

### 3. COMPOSITION/ INFORMATION ABOUT THE SUBSTANCES

#### 3.1. Mixtures

##### Chemical Characteristics

The mixture contains the following dangerous substance and substance with given maximum permitted workplace air concentration:

Id. numbers	Subst.	Weight of substance in %	Classification 67/548/EHS	CLP classification		CLP labeling			Notes
				Class codes and hazard category	Standard hazard phrases codes	Codes of symbols and signal phrases	Standard hazard phrases codes	Additional stand. Hazard phrases codes	
Index: 603-002-00-5 CAS: 64-17-5 ES:200-578-6	Ethanol	>75	R 11						
Index: 603-117-00-0 CAS: 67-63-0 ES: 200-661-7	Propan-2-ol	<5	R 11-36-67						

##### Notes

(\*) Substance with a Community workplace exposure limit.

Full text of all standard phrases and directions are specified in Section 16.

### 4. FIRST AID MEASURES

#### 4.1. Description of First Aid Measures:

In case there are medical problems or in case of doubt, call the doctor and provide him with the information contained in this Safety Data Sheet. If unconscious, place the person in the recovery position with the head slightly tilted back, establish free airway, never induce vomiting. If vomiting, make sure, to avoid aspiration.

##### If inhaled

Remove the victim to fresh air and keep at rest in a position comfortable for breathing. Keep warm. If irritation persists, seek medical advice.

##### In case of skin contact

Take off all contaminated clothing immediately. Wash exposed skin with large amount of warm water and soap. Seek medical advice.

##### In case of eye contact

Remove contact lenses. Rinse with large amount of lukewarm water, also under the eye lids for 10-15 minutes and seek medical advice.

##### If swallowed

Place the victim at rest. Rinse the mouth with water (only if victim is conscious), never induce vomiting. Seek medical advice immediately and show this container or label.

## 4.2. Most Important Acute and Delayed Symptoms and Effects

### If inhaled

Possible respiratory system irritation, cough, headache.

### If swallowed

Irritation, nausea.

### In case of eye contact

Irritation, redness, tearing, pain.

### In case of skin contact

Painful redness, irritation

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

Not specified.

## 5. FIREFIGHTING MEASURES

### 5.1. Suitable extinguishing media

Alcohol resistant foam, Carbon dioxide (CO<sub>2</sub>), dry powder, water spray jet, water mist,

#### Extinguishing media which must not be used

High volume water jet

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

Fire will produce dense, black smoke, which can cause formation of carbon monoxide, carbon dioxide and other toxic fumes. Inhaling of hazardous degradation products can cause serious health problems.

### 5.3. Advice for firefighters

The mixture is highly flammable. Keep the closed containers with the mixture and surroundings cool with water spray. Do not discharge contaminated fire extinguishing water into drains, surface and ground water. Use protective breathing equipment and protective suit.

## 6. ACCIDENTAL RELEASE MEASURES

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

Remove all sources of ignition, secure adequate ventilation. Use personal protective equipment. Proceed in accordance with instructions in Sections 7 and 8.

### 6.2. Environmental precautions

Prevent from soil contamination and entering into surface and ground water. Do not let entering into drains.

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

Soak up with inert absorbent (flammable) material (sand, diatomaceous earth, soil or other appropriate absorbents), collect in tightly closed containers and dispose as per paragraph 13. Dispose of in accordance with local regulations. In case of large volume of

mixture release, inform firefighters and environmental office of the municipal authority. After mixture removal, wash the contaminated place with large amount of water or other cleaning detergent. Do not use solvents.

**6.4. Reference to other sections**

7,8 and 13.

**7. HANDLING AND STORAGE**

**7.1. Precautions for safe handling**

Prevent from fumes and vapors release in flammable or explosive concentrations exceeding the maximum permitted workplace air concentration. Do not use mixture in areas with open fire or other ignition source. Do not smoke. Protect from direct sunlight. Take precautionary measures against static discharges, Use only grounded pipes (hosepipes) when transferring. It is recommended to use antistatic clothing and footwear. Use non-sparking tools. Do not inhale fumes and vapors. Avoid contact with skin and eyes. Use personal protecting equipment in accordance with Section 8. Observe regulations on health and safety.

**7.2. Conditions for safe storage of substance and mixtures, including any incompatibilities**

Store in a tightly closed containers in a cool well ventilated place. Do not expose to sunlight.

Content 5 liters  
 Type of packaging canister  
 Material of packaging FE (40), steel (metals)



FE

Storing temperature <35°C

**Specific requirements or rules related to the substance/mixture**

Vapors are heavier than air and may spread along floors and form explosive mixture when mixed with air.

**7.3. Specific final use**

Not specified.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTIVE EQUIPMENT**

**8.1. Control parameters**

Exposure limits

Substance	CAS Number	Type	Value	Note
Ethanol	64-14-5	PEL	1000 mg/m3	
		NPK-P	3000 mg/m3	
Propan-2-ol	67-63-0	PEL	500 mg/m3	
		NPK-P	1000mg/m3	

## 8.2. Exposure controls

### Proper technical controls

Observe the usual precautions to protect the health and provide good ventilation. This can be achieved by local extraction system or effective ventilation. If it is not possible, appropriate protection of respiratory system should be secured. Do not eat, drink or smoke when working. Wash your hands thoroughly with soap water after work and before meal or rest breaks.

### Eyes and face protection

Safety goggles or face shield (depending on nature of work)

### Skin protection

Hands protection: Safety gloves resistant to product. Request information on gloves width, material and permeation properties from the glove supplier. For longer or repeated contact of the mixture with skin, use suitable protective skin cream. Observe other manufacturer's recommendations. Other protection: Protective antistatic clothing made of natural fibers (cotton) or synthetic fibers, resistant to elevated temperatures. Wash the polluted skin thoroughly.

### Respiratory system protection

Not classified.

### Thermal hazard

Not classified.

### Reduction of exposition

Observe the usual precautions to protect the Environment, see paragraph 6.2.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Appearance:	fluid
State of matter:	liquid at 20°C
Color:	clear
Smell:	
Ignition temperature:	>200°C
Flash-point	1,5-10 % volume
Density	0,82 g/cm <sup>3</sup> at °C
Solubility in water:	yes

### 9.2. Other information

Auto flammability	>200°C
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## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

The mixture is highly flammable.

### 10.2. Chemical stability

The mixture is stable under conditions of normal use.

### 10.3. Possibility of hazardous reactions

The mixture is stable under conditions of normal use.



**10.4. Conditions to avoid**

The mixture is stable under conditions of normal use, no decomposition if used as directed. Keep away from flames, overheating, sparks and freeze.

**10.5. Materials to avoid**

Keep away from strong acids, alkalis and oxidizing agents. This prevents the formation of a hazardous exothermic reaction.

**10.6. Hazardous decomposition products**

No decomposition if used as directed. Hazardous products such as Carbon monoxide and Carbon dioxide, fume and nitrogen oxides.

**11. TOXICOLOGICAL INFORMATION**

Acute toxicity of the mixture components

Ethanol

LD50, orally, rat or rabbit 7060 mg.kg-1

LC50, inhaling, rat, by gas and fumes 2000 mg.1-1/4 hour

Propan-2-ol

LD50, orally, rat or rabbit 5840 mg.kg-1

**11.1. Information on toxicological effects**

Inhalation of solvent vapors above values exceeding the OEL may result in acute inhalation poisoning depending on the level of concentration and exposure time. It can cause irritation to mucous membranes and respiratory system as well as affecting the central nervous system.

**The following symptoms appear:**

Eye contact may cause irritation and reversible damage. When using as directed and following the principles of personal hygiene, no adverse effects were observed on human.

**Chronic toxicity:** Not specified, mixture components do not cause chronic poisoning.

**Sensitization:** Not specified, low expectancy.

**Carcinogenicity:** Not specified, mixture components do not have carcinogenic effect.

**Mutagenicity:** Not specified. Toxicity on reproduction: Not specified, mixture components are non-toxic on reproduction.

**12. ECOLOGICAL INFORMATION****12.1. Toxicity**

**Acute toxicity of the mixture to aquatic organisms**

The product does not contain substances acting against microorganisms.

**Acute toxicity of the mixture components to aquatic organisms**

Not specified.

**12.2. Persistence and decomposability**

The mixture is biodegradable.

**12.3. Bio-accumulative potential**

Insignificant.

**12.4. Mobility in soil**

The product is soluble and mobile in water and soil. In case of rain, possible contamination of river bed.

**12.5. PBT and PvB results**

Not applicable.

**12.6. Other adverse effects**

Not specified.

**13. DISPOSAL CONSIDERATIONS**

Risk of contamination of the environment, follow the Act No. 185/2001 Coll. on waste, as amended, and implementing regulations on waste disposal.

**13.1. Waste treatment methods**

Act. No. 185/2001 Coll. On waste, as amended, Act No. 477/2001 Coll., on packaging and on amendments to certain Acts (the packaging), as amended, Decree 376/2001 Coll., on classification of hazardous properties of waste, as amended, Decree 381/2001 Coll. (waste catalog), as amended, 383/2001 Coll., on details of waste, as amended.

**14. TRANSPORT INFORMATION****14.1. UN number**

UN 1987

**14.2. UN proper shipping name**

ALCOHOLS, J.N.

**14.3. Class/ Transport hazard class**

3 Flammable fluids

**14.4. Packaging group**

II.- moderately hazardous substances

**14.5. Environmental hazards**

It is not expected to have long-term adverse effects on the environment.

**14.6. Special precautions for users**

References in paragraphs 4 to 6.

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

Not specified.

**14.8. Additional information**

Avoid transport on vehicles where the load space is not separated from the driver. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in case of an accident or danger.

Hazard Identification number	33	(Kemler's code)
UN Number	1987	
Classification Code	F1	

Safety signs



**Road transport- ADR**

Special provisions	274,601
Limited quantities	5 L
<b>Packaging</b>	
Instructions on packaging	P001, IBC03, LP01, R001
Packing provisions	MP19
<b>Portable tanks and containers for bulk materials</b>	
Instructions	T4
Special provisions	TP1, TP29
<b>Tanks ADR</b>	
Tank code	LGBF
Vehicles for transport in tanks	FL
Transport category	3
Tunnel restriction code	D/E
<b>Special provisos for transport pcs operation</b>	V12 S2

**Air transport- ICAO/ IATA**

Packing instructions	Y344
Limited quantities	
Passenger packing instructions	355
Cargo transport	366

**Transport by sea- IMDG**

Danger initiator	alcohols
EMS (emergency plan)	F-E, S-D
MFAG	310

## 15. REGULATORY INFORMATION

Regulations concerning safety, health and environmental regulations/ legislation specific for the substance or mixture.

### Health Safety regulations

Government Regulation No. 361/2007 Coll. Laying down conditions for the protection of health at work.

Act No. 20/1966 Coll., on Health Care, as amended.

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

### Regulations to protect air

Decree No. 355/2002 Coll. as amended, on the emission limits.

### Fire regulations

Act No. 133/1985 Coll., as amended. CSN 65-0201- Flammable liquids, plants and warehouses. Decree No. 246/2001 Coll., on fire prevention.

Government Regulation No. 194/2001 Coll. laying down technical requirements for aerosol dispensers, as amended by Government Regulation No. 305/2006.

### Chemical safety assessment

Unknown.

## 16. ADDITIONAL INFORMATION

List of R-phrases with not specified meaning in other sections

R 11	Highly flammable
R 36	Eye irritating
R 67	Vapors may cause fatigue and nausea

Further information relevant to the safety and health of human beings

The product should not be- without special permission of the manufacturer/importer-used for any purpose other than specified in chapter 1. User is responsible for compliance with all relevant legislation for the protection of health.

### Key to abbreviations and acronyms used in the safety data sheet

CAS Unique numeric identifier used in chemistry for chemicals

CLP Classification, labeling and packaging

CSN Czech Technical Standard

EC50 concentration of the substance in which 50 % of the population is affected

IC50 concentration causing 50% blockade

LC50 lethal dose of the substance in which it can be expected to cause death in 50% of the population

LD50 lethal dose of the substance in which it can be expected to cause death in in 50% of the population

EINECS European Inventory of Existing Commercial Chemical Substances

EmS Contingency Plan

ICAO International Civil Aviation Organization

IATA International Air Transport Association

IMDG International Maritime Dangerous Goods Manual

MF AG first aid

MARPOL International Convention for the Prevention of Pollution from Ships

REACH Registration, Evaluation and Restriction of Chemicals (Regulation EP and Council Regulation (EC) No. 1907/2006)

PBT Persistent, bio-accumulative and toxic

vPvB very persistent and very bio-accumulative

IBC International Code of the Construction and Equipment of Ships carrying Dangerous Chemicals

**Guidelines for training**

Inform workers with the recommended use, mandatory protective equipment, first aid and allowed manipulations with the mixture.

**Recommended restrictions on use**

Not known.

Information on data sources used to compile the safety guidelines

European Parliament and Council Regulation (EC) No. 1907/2006 (REACH) Directive 67/548/EEC as amended and 1999/45/EC, the list of compulsory classified substances in accordance with Decree No 232/2004Coll. as amended, the data from the company or enterprise database of hazardous substances.

**Statement**

Safety Instructions contain information to ensure the health and safety at work and environmental protection. The data correspond to the current state of knowledge and experience and are in compliance with applicable laws and regulations. They can not be considered a guarantee of the suitability of the product for a specific application.