

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING ***Identification of the substance or preparation:** IBITOL, IBITOL E-5, IBITOL PRO**Use of the substance/preparation:**

Cold bitumenous primer before application of bituminous products in general.

Company/undertaking identification: FRAGMAT TIM, Tovarna izolacijskega materiala d.d.

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Emergency telephone: FRAGMAT TIM d.d. phone: + 386 (0)3 73 44 500**2. HEALTH HAZARDS DATA *****Human health:** Harmful: may cause lung damage if swallowed. Irritating to skin.

When using it at higher temperature, an inflammable/explosive vapour-air mixture can be formed. Danger of electrostatic charges. Repeated exposure may cause the appearance of dry or cracked skin.

Vapours may cause drowsiness and dizziness.

Environmental effects: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**Physicochemical effects:** Inflammable.**3. COMPOSITION/INFORMATION ON INGREDIENTS *****Chemical composition:** mixture of hydrocarbons.**Taric code:** 2715 00 100**Components dangerous to health and environment:**

Composition	Content (weight %)	CAS number	EINECS number	Index number	R directives	Symbol
Bitumen	40 to 70	8052-42-4	232-490-9	/	/	/
Naphtha (petroleum), hydrodesulfurized heavy - White Spirit Op.H, Op. P, *	30 to 60	64742-82-1	265-185-4	649-330-00-2	10-38-51/53-65-67	X _n , N

* In the substance with number CAS 64742-82-1 the content of benzene (EC-Number 200-753-7) is less than 0,1 % by weight.

4. FIRST AID MEASURES *

General: Vapours of the product have a narcotic effect and irritate mucous membranes. Long lasting exposure may cause loss of consciousness and also death. The solvent is absorbed through the skin, but it does not have acute, immediate effects. In high concentration it may cause irritation of the eyes and mucous membranes. In case of suspected poisoning the victim has to be brought into medical care. It is necessary to show this material safety data sheet to the doctor.

Inhalation: The victim should be brought to fresh air and if necessary, artificial respiration has to be carried out. It is necessary to call for the help of a doctor.

Skin contact: It is necessary to wash contaminated parts thoroughly with lots of water and soap. If irritation appears, it is necessary to seek medical advice.

Eye contact: If the eyes come in contact with the product, it is necessary to wash out the eyes with water for approx. 10- 15 minutes. If irritation does not stop, it is necessary to visit an eye specialist.

Ingestion: In case of ingestion do not cause vomiting. Call for a doctor.

5. FIRE-FIGHTING MEASURES

Dangerous decomposition products: Dense black smoke, CO, CO₂ and soot.

Special protective equipment for fire-fighters: In fires of bigger dimension and fires inside it is absolutely necessary to use an isolating breathing apparatus and protective clothing. Use non-sparking materials, which do not produce electrostatic charges.

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases: Sputtering of the liquid compound, vapours form together with air an explosive mixture that is heavier than air.

Suitable extinguishing media: Dry extinguishing agents, dry powder, light foam extinguisher and water mist.

Unsuitable extinguishing media: Full jet of water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Remove all sources that could cause inflammation. Evacuate and ventilate the place of outflow. Inform all persons in the vicinity of the place of outflow about the danger of inhaling vapours and the danger of fire. During removal wear clothes, completely protecting you (chapter. 8).

Environmental precautions: Prevent the outflow of the preparation into water, the sewage system or into the ground water. Prevent further evaporation into the air.

Methods for cleaning: Cover contaminated surfaces with earth or other adequate absorbing materials. Material that was removed, is kept in containers in good ventilated rooms and is disposed of as described in chapter 13.

7. HANDLING AND STORAGE *

Handling: Handling the product, it is necessary to use protective equipment, as described in point 8 of this material safety data sheet. Drinking the product is prohibited. Smoking is prohibited. Inhaling the vapours should be avoided.

Storage: Material has to be stored in a dry and cool place, in warehouses that prevent contamination. The product should not be at places, where formation of sparks can occur (static electricity) and not be in contact with open flames.

Specific use(s): Use the product in accordance with the instructions stated on the label of the product.

8. EXPOSURE CONTROLS *

Technical measures: Good ventilation should be taken care of, this will make sure that the prescribed limit values of exposure are not exceeded – in case they are exceeded, it is necessary to protect the respiratory organs with a breathing device. Avoid contact of the product with the skin or the eyes. The floor of the storage room has to be resistant to solvents. Only earthed devices should be used.

There is an 8-hour exposure limit in the atmosphere of the working place

Aromatic hydrocarbons, group 2; CAS 64742-82-1 BV= 500 mg/m³; 100 ml/m³; KTV 4

Respiratory protection: Avoid inhaling the vapours. Wear a protective mask. if higher concentrations appear (above average allowed concentration), respectively for longer exposition: filter type A for gases/vapours of organic substances.

Hand protection: Protection gloves from nitrile rubber.

Eye protection: Goggles with side protection or protective mask.

Skin protection: In normal conditions warm clothes and footwear from rubber. In case of danger from spillage, clothes for the protection from liquid chemicals (Viton, PVC, Himex).

Hygienic measures: Avoid repeated contact with the skin. Wash working clothes more often than usual.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information:

Physical state: viscous liquid

Colour: black

Odour: odour similar to bitumen and naphtha

Important health, safety and environmental information:

pH: not important (is not used)

Boiling point: from 140°C to 210°C

Flashpoint: from 30°C to 45°C

Dry remains: from 40 to 70 %.

Vapour in % by volume: from 30 to 60 %

Solubility in water: not soluble

Relative density at 20°C: 0,80 to 0,90 kg/m³

Inflammability: inflammable

Explosive characteristics: vapours of the product together with air are explosive

Oxidative characteristics: /

Vapour pressure: /

Distribution coefficient: /

Viscosity: /

Vapour density: /

Evaporation rate: /

10. STABILITY AND REACTIVITY

Conditions to avoid: Remove all sources of inflammation and warmth and open flames. Heating causes an increase in pressure.

Materials to avoid: Oxidants, strong acids and bases.

Hazardous decomposition products: Products are CO, CO₂, NO_x mixed hydrocarbons.

11. TOXICOLOGICAL INFORMATION

The product has not been specially tested. Its harmfulness can be evaluated on the basis of its single components. It contains less than 0,1% carcinogenic substances.

Toxicological information about contents: The toxicological classification of ingredients is determined according to conventional methods on the basis of toxicological characteristics of the single ingredients in the product.

Founded on experience and existing information, no health hazards are known under competent use.

Acute effects:**1) Naphtha (petroleum), hydrodesulfurized heavy - White Spirit**

after ingestion: ingestion of more than 40 g may lead to death in grown-up humans. If the product enters the lungs (during ingestion or vomiting), it may cause damage to the lungs. Effects can be: unconsciousness, cramps, salivation, vomiting, sudden loss of consciousness, ...

on the eyes: primarily irritation of the eyes - rabbit: in non-repetitive application at 100 mg minimal irritation of the eye mucous membrane.

on the skin: Acute dermal toxicity: rats non-toxic at concentrations of 5000 /Kg inflammation of the skin, dry, cracked skin .

in inhaling: Gasoline vapours of high concentration in not ventilated rooms may cause irritation of the respiratory tract, headache, faintness, vomiting, unconsciousness and suffocation. Concentrations that exceed 35 g/m³ may cause death after 5 to 10 minutes.

allergy: no data

carcinogenicity: no data

mutagenicity: Test for mutagenicity on Salmonello tyhimurium (Ames test): does not have mutagene characteristics

reproductive toxicity: no data

2) Bitumen

after ingestion: LD 50 oral (rat): > 5g/kg .

on the eyes:/

on the skin: LD 50 dermal (rabbit): > 5g/kg

in inhaling: LD 50 inhaling: > 5mg/l/4h , danger of hydrogen sulfide at high temperatures. The ability to recognize H₂S is very high in the human being at the beginning, but it decreases quickly with the time of exposition - a quick cessation of the strong smell of foul eggs.

allergy, carcinogenicity, mutagenicity: no data

reproductive toxicity: No data .

12. ECOLOGICAL INFORMATION *

Mobility: The product does not mix with water. It forms a compact layer on the water surface, that prevents the entry of oxygen into the water. This may cause the suffocation of water animals.

Ecotoxicity The product is dangerous to the environment, because it may cause long lasting damaging effects on the water environment. Prevent the entry of the product into water-courses and springs.

Ecotoxic information about contents:

1) Naphtha (crude oil), difficult to desulphurize with hydrogen - White Spirit

Mobility: Liquid under normal circumstances. Lighter than water: Volatile also at normal temperatures of the surrounding.

Persistence and degradability: Can be volatile.

Bioaccumulative potential: No data.

Other adverse effects: It forms a layer on the water surface that prevents the entry of oxygen into the water and therefore causes harmful effects on the water flora and fauna.

2) Bitumen

Mobility: In the solid state of aggregation it does not mix with water.

Persistence and degradability: /

Bioaccumulative potential: No data.

Ecotoxicity:

Chemical use of oxygen; KPK = 3090 mg O₂/g

Toxicity for water organisms: LC 50/96h = 10-100 mg/l

Effects on the atmosphere: none of its components is harmful for the ozone layer

LC 50/96 trout > 1000 mg/l

Sulphur: less than 3%

Other adverse effects: /

13. DISPOSAL CONSIDERATIONS *

The material is classified as a waste that is risky for burning. It can be disposed of by burning at authorized institutions for the disposal of naphtha wastes.

The wastes of the product are classified as:

Cleaned waste packaging: plastic packaging, metal packaging,

Not-cleaned waste packaging: group packaging that contains rests of dangerous substances or is contaminated with dangerous substances,

Wastes of the product: wastes from adhesives and sealing compounds that contain organic solvents and other dangerous substances.

Process of waste disposal according to the Regulations for the Disposal of Waste.

14. TRANSPORT INFORMATION *

ADR / RID

Class: 3

Packing group: III

Danger number: 30

UN number: 1300 TURPENTINE SUBSTITUTES, SOLUTIONS

Legislation: The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)

15. REGULATORY INFORMATION *

Classification of dangers: X_n – harmful; N – dangerous for the environment

Contains: Naphtha (petroleum), hydrodesulfurized heavy - White Spirit

R directives: R10 Inflammable.
R38 Irritating to skin.
R65 Harmful: may cause lung damage if swallowed.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67 Vapours may cause drowsiness and dizziness.

S directives : S2 Keep out of the reach of children.
S24/25 Avoid contact with skin and eyes.
S46 If swallowed, seek medical advice immediately and show this container or label.
S36/37 Wear suitable protective clothing and gloves.

The product has been classified and marked in accordance with EU Directive EEC 67/548/ relating to the classification, packaging and labelling of dangerous substances and EU Directive 1999/45/EC relating to the classification, packaging and labelling of dangerous preparations.

16. OTHER INFORMATION *

This document contains important information regarding storage, handling and use of the mentioned product.

The material safety data sheet is formulated in accordance with the regulation REACH 1907/2006 (law gazette EC no. L 136/2007).

R directives from point 3: R10 Inflammable.
R38 Irritating to skin.
R65 Harmful: may cause lung damage if swallowed.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67 Vapours may cause drowsiness and dizziness.

Changes in this material safety data sheet in respect to the former version: points 1, 2, 3, 4, 7, 8, 11, 12, 13, 14, 15 and 16.

Date of the first issue of the material safety data sheet: 23.05.2000; date of the previous issue: 01.03.2007.

Sources: Material safety data sheet for suppliers of solvents (20.01.2006 and 27.12.2003) and bitumen (27.12.2003).