



SAFETY DATA SHEET

1. Identification of the preparation and of the company/undertaking

Product Name and/or Code : HEMPALIN UNDERCOAT 42460
 4246010000
Company name and address : Hempel A/S
 Lundtoftevej 150
 DK-2800 Kgs. Lyngby
 Denmark
 Tel.: + 45 45 93 38 00
Emergency phone:
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 See section 4 First aid measures.
Product Type : alkyd undercoat
Field of application : metal industry, ships and shipyards.
Date of issue : 20-01-2004.
Date of Previous Issue : 04-06-2003.

2. Composition / information on ingredients

Ingredients presenting a hazard within the meaning of EU and National regulations.

| Ingredient Name | CAS No. | % | EC Number | Classification |
|------------------|------------|---------|-----------|--|
| white spirit | 64742-88-7 | 20-30 | 265-191-7 | R10 Xn; R65 N; R51/53 |
| xylene | 1330-20-7 | 2-5 | 215-535-7 | R10 Xn; R20/21 Xi; R38 |
| 2-butanone oxime | 96-29-7 | 0.2-0.5 | 202-496-6 | Carc. Cat. 3; R40 Xn; R21 Xi; R41 R43 |

Notes

(*) See full text of phrases under section 16 and occupational Exposure Limit(s), if available, are listed in section 8

3. Hazards identification

Flammable. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Contains (2-butanone oxime). May produce an allergic reaction.

4. First-aid measures

General : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation : Move the person into fresh air and keep the person under surveillance. Keep person warm and at rest. If not breathing, if irregular breathing, or respiratory arrest occurs provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and seek medical advice.
Eye Contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. In all cases of doubt, or when symptoms persist, seek medical attention.
Skin Contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion : If swallowed, seek medical advice immediately and show this document. Keep person warm and at rest. Do NOT induce vomiting unless directed to do so by medical personnel. Lower the head so that the vomit will not reenter the mouth and throat.

5. Fire-fighting measures

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Fire-fighters should wear proper protective equipment. Cool closed containers exposed to fire with water. Do not release runoff from fire to sewers or waterways.

Extinguishing Media : Recommended: alcohol resistant foam, CO₂, powders, water spray.
Not to be used : waterjet.

Fire Degradation Products : These products are carbon oxides (CO, CO₂). Some metallic oxides.

6. Accidental release measures

Exclude sources of ignition and be aware of explosion hazard. Ventilate the area.

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth, and place in container for disposal according to local regulations (see section 13). Do not allow to enter drains or watercourses. Clean preferably with a detergent; avoid use of solvents. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulation.

7. Handling and storage

Handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used.

Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

Storage

Store in accordance with local regulations for flammable liquids. Observe label precautions. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

8. Exposure controls/personal protection

- Engineering measures** : Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapors or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
- Hygiene measures** : Wash hands, forearms, and face thoroughly after handling the product and before eating, smoking, using lavatory, and at the end of day.

| Ingredient Name | Occupational Exposure Limits |
|-----------------|---|
| white spirit | 80/1107/EEC (Europe, 2000). Notes: Tentativ TWA: 25 ppm 8 hour(s). TWA: 145 mg/m ³ 8 hour(s). |
| xylene | EU OEL (Europe, 2000). Skin Notes: Indicative STEL: 442 mg/m ³ 15 minute(s). STEL: 100 ppm 15 minute(s). TWA: 221 mg/m ³ 8 hour(s). TWA: 50 ppm 8 hour(s). |

Personal protective equipment

- General** : Gloves must be worn for all work that may result in soiling.
Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product.
- Respiratory system** : If working areas have insufficient ventilation, wear half or totally covering mask equipped with gas filter of type A (Brown), when grinding with particle filter of type P2. When spraying wear combined filter AP. Be sure to use approved/certified respirator or equivalent. Always wear air-fed respirator when spraying. In continuous and prolonged work isolating protection (e.g. hood with supply of fresh or compressed air) or motor driven fan protection is recommended.

| | |
|---------------|---|
| Skin and body | : If necessary wear protective clothing. Always wear protective clothing when spraying. |
| Hands | : Wear suitable gloves. Barrier creams may help to protect the exposed areas of the skin, but should not be applied once exposure has occurred. Barrier creams may not be used under or instead of gloves. It is not possible to specify precise type of gloves, since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. |
| Eyes | : Use safety eyewear designed to protect against splash of liquids. |

9. Physical and chemical properties

| | |
|---------------------|---------------------------------------|
| Physical state | : Liquid. |
| Density | : 1.43 g/cm ³ |
| Solubility | : Insoluble in cold water, hot water. |
| Flash point | : Closed cup: 38°C (100.4°F). |
| Explosion Limits | : 0.5 - 8 vol % |
| % Solvent by Weight | : Weighted average: 27 % |
| % Water by Weight | : Weighted average: 0 % |
| VOC Content | : Weighted average: 380 g/l (CEPE) |
| TOC Content | : Weighted average: 322 g/l |
| Solvent Gas | : 0.068 m ³ /l paint |

10. Stability and reactivity

Stable under recommended storage and handling conditions (see section 7).

Reactive with metals.

Slightly reactive to reactive with oxidising agents.

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

These products are carbon oxides (CO, CO₂). Some metallic oxides.

11. Toxicological information

Effects and symptoms

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Sensitization : Contains (2-butanone oxime). May produce an allergic reaction.

Acute toxicity

| Ingredient Name | Test | Result | Route | Species |
|------------------|------|-----------------------|------------|---------|
| white spirit | LD50 | 5000 mg/kg | Oral | Rat |
| | LD50 | 3000 mg/kg | Dermal | Rabbit |
| | LC50 | >14 mg/l (4 hour(s)) | Inhalation | Rat |
| xylene | LD50 | 4300 mg/kg | Oral | Rat |
| | LD50 | >1700 mg/kg | Dermal | Rabbit |
| | LDLo | 50 mg/kg | Oral | human |
| | LC50 | >6700 ppm (4 hour(s)) | Inhalation | Rat |
| 2-butanone oxime | LD50 | 930 mg/kg | Oral | Rat |
| | LD50 | >200 mg/kg | Dermal | Rat |
| | LC50 | 20 mg/l (4 hour(s)) | Inhalation | Rat |

12. Ecological information

The product must not be drained into water courses or drainage system.

The product is considered having hazardous effects in the aquatic environment following the method of the Dangerous Preparations Directive.

| Ingredient Name | Species | Period | Result |
|-----------------|----------------------------|------------|----------|
| xylene | Oncorhynchus mykiss (LC50) | 96 hour(s) | 8.2 mg/l |

13. Disposal considerations

Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations.

Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.



European waste catalogue no. (EWC) and national waste group, catalogue, code or number is given below.

EWC no. : 08 01 11

14. Transport information

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea.

The transport classification is according to ADR 2003, IMDG edition 2002 (incl. Amdt. 31-02).

| | UN-no. | Proper shipping name | Class | PGr. | Label | Additional information |
|----------------------|--------|-----------------------|-------|------|--|-----------------------------------|
| ADR/RID Class | UN1263 | PAINT | 3 | III |  | Remarks H-14 |
| IMDG Class | UN1263 | PAINT. (white spirit) | 3 | III |  | EmS F-E, S-E (P) |

15. Regulatory information

Classification and labelling according to EU-Directives (the Preparations directive etc.).

Classification : **Flammable**

Risk Phrases : R10- Flammable.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases : S16- Keep away from sources of ignition - No smoking.
S23- Do not breathe vapor/spray.

Additional Warning Phrases : Contains (2-butanone oxime). May produce an allergic reaction.

Other EU Regulations

Classification and labeling have been performed according to EU directives 67/548/EEC, 1999/45/EC including amendments and the intended use.

- Industrial applications, Used by Spraying.

16. Additional information

Full text of R-Phrases with no. appearing in Section 2 - Europe :

- R10- Flammable.
- R40- Limited evidence of a carcinogenic effect.
- R20/21- Harmful by inhalation and in contact with skin.
- R21- Harmful in contact with skin.
- R65- Harmful: may cause lung damage if swallowed.
- R38- Irritating to skin.
- R41- Risk of serious damage to eyes.
- R43- May cause sensitization by skin contact.
- R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Text of classifications appearing in Section 2 - Europe : Carc. Cat.3 - Carcinogen Category 3
Xn - Harmful
Xi - Irritant
N - Dangerous for the environment.

Notice to Reader

Modified data or content compared with the previous version are marked with a triangular marker in the upper-left corner within the Safety Data Sheet.

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical performance or suitability for particular applications. It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.