






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

- **1.1 Product identifier**
- **Trade name: Normadur 65 HS Comp. A**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
Coating
2-component polyurethane paint
- **Application of the substance / the preparation**
Uses in Coatings - Industrial use
Uses in Coatings - Professional use
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Nor-Maali Oy
Vanhatie 20
15240 LAHTI
FINLAND
sds@nor-maali.fi tai myynti@nor-maali.fi
Y-tunnus: 0148460-9
- **Further information obtainable from: MSDS (Nor-Maali Oy) tel.+358 3 874 650**
- **1.4 Emergency telephone number: Contact National Poison Center**

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
-  Xn; Harmful
R20/21: Harmful by inhalation and in contact with skin.
-  Xi; Irritant
R38: Irritating to skin.
-  N; Dangerous for the environment
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R10: Flammable.
- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **2.2 Label elements**
- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:**
-   Xn Harmful
N Dangerous for the environment
- **Hazard-determining components of labelling:**
xylene

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- **Risk phrases:**

- 10 Flammable.
- 20/21 Harmful by inhalation and in contact with skin.
- 38 Irritating to skin.
- 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Safety phrases:**

- 23 Do not breathe spray.
- 25 Avoid contact with eyes.
- 36/37 Wear suitable protective clothing and gloves.
- 51 Use only in well-ventilated areas.
- 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

- **Special labelling of certain preparations:**

Contains Rasvahappojen C-18, tydyttymättömiä trimeerejä, 9-oktadeken-1-amiinin kanssa, 2-butanone oxime. May produce an allergic reaction.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119486136-34-xxxx	xylene Xn R20/21; Xi R38 R10 Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	10-25%
CAS: 7779-90-0 EINECS: 231-944-3 Reg.nr.: 01-2119485044-40-XXXX	trizinc bis(orthophosphate) N R50/53 Aquatic Acute 1, H400; Aquatic Chronic 1, H410	2.5-10%
CAS: 100-41-4 EINECS: 202-849-4	ethylbenzene Xn R20; F R11 Flam. Liq. 2, H225; Acute Tox. 4, H332	2.5-10%
CAS: 107-98-2 EINECS: 203-539-1	1-methoxy-2-propanol R10-67 Flam. Liq. 3, H226; STOT SE 3, H336	2.5-10%
CAS: 96-29-7 EINECS: 202-496-6	2-butanone oxime Xn R21-40; Xi R41; Xi R43 Carc. Cat. 3 Carc. 2, H351; Eye Dam. 1, H318; Acute Tox. 4, H312; Skin Sens. 1, H317	0.1-1%
CAS: 64742-95-6 EINECS: 265-199-0 Reg.nr.: 01-2119455851-35-xxxx	Solvent naphtha (petroleum), light arom. Xn R65; Xi R37; N R51/53 R10-66-67 Carc. Cat. 2 Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Acute Tox. 4, H332; STOT SE 3, H335-H336	0.1-1%

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CAS: 147900-93-4	Rasvahappojen C-18, tyydyttymättömiä trimeerejä, 9-oktadeken-1-amiinin kanssa T R48/25; Xi R43; N R51/53 STOT RE 1, H372; Aquatic Chronic 2, H411; Skin Sens. 1, H317	0.1-1%
CAS: 64742-82-1 EINECS: 265-185-4	Naphtha (petroleum), hydrodesulfurized heavy Xn R65; N R51/53 R10 Flam. Liq. 3, H226; Carc. 1B, H350; Asp. Tox. 1, H304	0.1-1%
CAS: 1314-13-2 EINECS: 215-222-5 Reg.nr.: 01-2119463881-32-xxxx	zinc oxide N R50/53 Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.1-1%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **After inhalation:**

Remove person exposed to excessive solvent concentrations to fresh air, keep patient warm and at rest. If breathing is irregular, call national emergency number, if needed start giving artificial respiration and seek medical advice.

· **After skin contact:**

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

· **After eye contact:**

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

· **After swallowing:**

If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do not induce vomiting.

· **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **Information for doctor:** Treatment according to symptoms.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released: smoke (contains health hazard decomposition products).

· **5.3 Advice for firefighters**

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

· **Protective equipment:** No special measures required.

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SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist.
Refer to protective measures listed in sections 7 and 8.
- **6.2 Environmental precautions:**
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits. In addition, the product should only be used 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, earth drum and connect to receiving container with bonding strap. Operators should wear antistatic footwear and clothing and floors should be of the conducting type. Keep container tightly closed. Keep away from heat, sparks and flame. No sparking tools should be used.
Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Avoid inhalation of dust from sanding. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Put on appropriate personal protective equipment (see section 8).
Never use pressure to empty. Container is not a pressure vessel.
Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in accordance with local regulations. Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. Keep away from: oxidising agents, strong alkalis, strong acids.
No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not empty into drains.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.

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· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.· **8.1 Control parameters**· **Ingredients with limit values that require monitoring at the workplace:****1330-20-7 xylene**

WEL	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
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100-41-4 ethylbenzene

WEL	Short-term value: 552 mg/m ³ , 125 ppm Long-term value: 441 mg/m ³ , 100 ppm Sk
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107-98-2 1-methoxy-2-propanol

WEL	Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm Sk
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· **Ingredients with biological limit values:****1330-20-7 xylene**

BMGV	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid
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· **Additional information:** The lists valid during the making were used as basis.· **8.2 Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

· **Respiratory protection:**

If ventilation is insufficient or if workers are exposed to concentrations above the exposure limit they must use half- or full mask with gas filter A (brown, organic substances), and when grinding P2 (Iib) -type dust filter. Mask with combined filter (gas & dust) AP must be used when spraying. In the continuous long-term work it is recommended to use motored air protector or separative protector (fresh air hood or compressed air hood or such).

· **Protection of hands:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Wear suitable gloves.

Recommended, gloves(breakthrough time) > 8 hours: fluor rubber, polyvinyl alcohol (PVA), nitrile rubber, 4H, Teflon

Not recommended, gloves(breakthrough time) < 1 hour: Viton, PE, butyl rubber

May be used, gloves(breakthrough time) 4 - 8 hours: neoprene, PVC

Hands

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.

The user must check that the final choice of type of glove selected for handling this

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product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment**

Product releases VOC-compounds (=volatile organic hydrocarbons) 450 g/l Comp. A. Unnecessary thinning will increase VOC-release.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Fluid
Colour: Coloured

- **Odour:** Strong

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 136 °C

- **Flash point:** 24 °C

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 430 °C

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**

Lower: 1.1 Vol %
Upper: 7.0 Vol %

- **Vapour pressure at 20 °C:** 6.7 hPa

- **Density at 20 °C:** 1.2 g/cm³

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

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· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic: Not determined.

Kinematic: Not determined.

· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No specific test data related to reactivity available for this product or its ingredients.

· **10.2 Chemical stability**

· **Thermal decomposition / conditions to be avoided:**

In confined or poorly ventilated spaces solvent may form an explosive mixture with air.

· **10.3 Possibility of hazardous reactions** No dangerous reactions known.

· **10.4 Conditions to avoid**

Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

· **10.5 Incompatible materials:** No further relevant information available.

· **10.6 Hazardous decomposition products:**

Hazardous decomposition products: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

1330-20-7 xylene

Oral	LD50	4300 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)

7779-90-0 trizinc bis(orthophosphate)

Oral	LD50	>5000 mg/kg (rat)
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· **Primary irritant effect:**

· **on the skin:** Irritant to skin and mucous membranes.

· **on the eye:** No irritating effect.

· **Other information (about experimental toxicology):**

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit 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 headache, 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. Swallowing may cause nausea, diarrhoea, vomiting, gastro-intestinal irritation and chemical pneumonia.

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

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SECTION 12: Ecological information

· 12.1 Toxicity

Mixture is classified to dangerous for the environment (harmful to aquatic organisms). Mixture contains following environmentally hazardous substances:

Zincphosphate:

LC50c= 0,14-0,26 mg Zn²⁺/l, 96 h, fish (Oncorhynchus mykiss); very toxic

EC50 = 0,04-0,86mg Zn²⁺/l, 48 h, water flea (Daphnia magna); very toxic

EC50 = 0,136-0,150 mg Zn²⁺/l, 72 h, alga (Selenastrum capricornutum); very toxic

· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** Hydrocarbons evaporate from water and ground and degrade in the air.

· **Ecotoxic effects:**

· **Remark:** Toxic for fish

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

The waste is collected and disposed of in accordance with regulations given by authorities. Liquid waste must be transported to facilities for collecting hazardous waste or to other similar places to be disposed of as hazardous waste. Solvent-free, hardened paint and painting waste can usually be taken to a public dump pit.

· **Waste disposal key:**

08 01 11* waste paint and varnish containing organic solvents or other dangerous

substances. If this product is mixed with other wastes, this code may no longer apply.

If mixed with other wastes, the appropriate code should be assigned. For further information, contact your local waste authority.

· **Uncleaned packaging:**

· **Recommendation:**

Empty, dry paint containers (hole made to the bottom) should be taken to collection centres for metallic paint packages.

If this collecting/recycling centre doesn't exist, containers can be taken to a local dump pit. For more information contact your local waste disposal authorities or paint deliverer.

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA**

UN1263

· **14.2 UN proper shipping name**

· **ADR**

· **IMDG**

· **IATA**

1263 PAINT, ENVIRONMENTALLY HAZARDOUS
PAINT (trizinc bis(orthophosphate), Solvent naphtha
(petroleum), light arom.), MARINE POLLUTANT
PAINT

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· **14.3 Transport hazard class(es)**

· **ADR, IMDG**



· **Class** 3 Flammable liquids.
 · **Label** 3

· **IATA**



· **Class** 3 Flammable liquids.
 · **Label** 3

· **14.4 Packing group**

· **ADR, IMDG, IATA** III

· **14.5 Environmental hazards:**

Product contains environmentally hazardous substances:
 trizinc bis(orthophosphate)

· **Marine pollutant:**

Yes

· **Special marking (ADR):**

Symbol (fish and tree)
 Symbol (fish and tree)

· **14.6 Special precautions for user**

Warning: Flammable liquids.

· **EMS Number:**

F-E,S-E

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

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)** 5L
 · **Transport category** 3
 · **Tunnel restriction code** D/E

SECTION 15: Regulatory information

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
 H226 Flammable liquid and vapour.
 H304 May be fatal if swallowed and enters airways.
 H312 Harmful in contact with skin.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H332 Harmful if inhaled.
 H335 May cause respiratory irritation.

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- H336 May cause drowsiness or dizziness.
H350 May cause cancer.
H351 Suspected of causing cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
- R10 Flammable.
R11 Highly flammable.
R20 Harmful by inhalation.
R20/21 Harmful by inhalation and in contact with skin.
R21 Harmful in contact with skin.
R37 Irritating to respiratory system.
R38 Irritating to skin.
R40 Limited evidence of a carcinogenic effect.
R41 Risk of serious damage to eyes.
R43 May cause sensitisation by skin contact.
R48/25 Toxic: danger of serious damage to health by prolonged exposure if swallowed.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

*** Data compared to the previous version altered.**

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