



SAFETY DATA SHEET

2400 Hard-Hat® Anti-Slip

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

Product name and/or code : 2400 Hard-Hat® Anti-Slip

Manufacturer : Rust-Oleum Netherlands BV, P.O. Box 138, NL-4700 AC Roosendaal, The Netherlands
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Product use : Paint. Finish coat.

2. Composition/information on ingredients

Substance/preparation : Preparation

Chemical name*	CAS No.	%	EC number	Classification
Europe				
Butane	106-97-8	10 - 25	203-448-7	F+; R12
Naphtha (petroleum), hydrotreated light	64742-49-0	10 - 25	265-151-9	R10 Xn; R65 R66, 67
Propane	74-98-6	10 - 25	200-827-9	F+; R12
Acetone (Propanon-2)	67-64-1	5 - 10	200-662-2	F; R11 Xi; R36 R66, 67
Naphtha (petroleum), hydrotreated light	64742-49-0	2.5 - 5	265-151-9	F; R11 Xn; R65 R66, 67 N; R51/53
Xylene (mixture of isomeres)	1330-20-7	0 - 1	215-535-7	R10 Xn; R20/21 Xi; R38
2-Butanonoxime	96-29-7	0 - 1	202-496-6	Carc. Cat. 3; R40 Xn; R21 Xi; R41 R43
See section 16 for the full text of the R Phrases declared above				

* Occupational Exposure Limit(s), if available, are listed in section 8

3. Hazards identification

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : R12- Extremely flammable.
R66- Repeated exposure may cause skin dryness or cracking.
R67- Vapors may cause drowsiness and dizziness.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. First aid measures

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 : Remove to fresh air. 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.

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.

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

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

See section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

- Extinguishing Media** : Recommended: alcohol resistant foam, CO₂, powders, water spray.
Not to be used : waterjet.
- Recommendations** : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to sewers or waterways.
- Special fire-fighting procedures** : Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
- Hazardous thermal decomposition products** : These products are carbon oxides (CO, CO₂). Some metallic oxides.

6. Accidental release measures

- Personal precautions** : Exclude sources of ignition and ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8.
- Spill** : 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 regulations.

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

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.
- Keep container tightly closed. Keep away from heat, sparks and flame. No sparking tools should be used.
- 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.
- Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates and spray mist arising from the application of this preparation. Avoid inhalation of dust from sanding.
- Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.
- Put on appropriate personal protective equipment (see Section 8).
- Comply with the health and safety at work laws.
- Storage** : Store in accordance with local regulations. Observe label precautions. Do not store above 35°C (95°F). Store in a cool, well-ventilated area away from incompatible materials and ignition sources.
- 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** : 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 vapors below the OEL, suitable respiratory protection must be worn.
- Hygiene measures** : Keep away from food, drink and animal feeding stuffs. Never eat, drink or smoke in work areas. Practice good personal hygiene when using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. It is generally recognized that contact lenses should not be worn when working with chemicals because contact lenses may contribute to the severity of an eye injury.

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
Europe	
Butane	ACGIH TLV (United States, 2/2003). TWA: 1900 mg/m ³ 8 hour(s). Form: All forms TWA: 800 ppm 8 hour(s). Form: All forms
Naphtha (petroleum), hydrotreated light	CEFIC-HSPA (Europe). Notes: Recommended by manufacturer (300 ppm) TWA: 1600 mg/m ³ 8 hour(s).
Propane	ACGIH TLV (United States, 2/2003). Notes: 1998 Adoption. 1998 Adoption. TWA: 2500 ppm 8 hour(s). Form: All forms Simple asphyxiant.
Acetone (Propanon-2)	EU OEL (Europe, 6/2000). Notes: Indicative TWA: 1210 mg/m ³ 8 hour(s). TWA: 500 ppm 8 hour(s).
Naphtha (petroleum), hydrotreated light	CEFIC-HSPA (Europe). Notes: Recommended by manufacturer (300 ppm) TWA: 1400 mg/m ³ 8 hour(s).
Xylene (mixture of isomeres)	EU OEL (Europe, 6/2000). 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).

Recommended monitoring procedures : Air monitoring can be used to determine ventilation requirements and compliance with applicable employee exposure limits.

Occupational exposure controls : Ventilation is normally required when handling or using this product.

Personal protective equipment

Respiratory system : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

Hands : For prolonged or repeated handling, use gloves: neoprene or nitrile.

Barrier creams may help to protect the exposed areas of the skin, but should not be applied once exposure has occurred.

Skin and body : Personnel should wear antistatic clothing made of natural fibers or of high-temperature-resistant synthetic fibers.

Eyes : Use safety eyewear designed to protect against splash of liquids.

9. Physical and chemical properties

Physical state	: Gas. (Spraycans Compressed Gas)
Color	: Depending on productnumber
Odor	: Solvent-like.
Specific gravity	: 0.7 to 0.75 (Water = 1)
pH	: Neutral.
Melting point	: <-90°C (-130°F)
Boiling point	: -40°C (-40°F)
Auto-ignition temperature	: The lowest known value is 365°C (689°F) (Butane).
Flash point	: Closed cup: -70°C (-94°F).
Lower explosion limit	: Lower: 2% Upper: 9% In use, may form flammable/explosive vapour-air mixture. Vapor may travel considerable distance to source of ignition and flash back. Heating may cause an explosion.
Evaporation rate	: >1 compared to Butyl acetate.
Solubility	: Insoluble in cold water, hot water.
Volatility (%)	: 83 to 86% (v/v). 71 to 76% (w/w).
VOC (W/W):	: 530 to 550 (g/l).

10. Stability and reactivity

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

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

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

11. Toxicological information

There is no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See Chapters 2 and 15 for details.

Exposure to component solvent vapor 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 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.

Contains (2-Butanone oxime). May produce an allergic reaction.

Potential acute health effects

Ingestion	: No data on acute toxicity of the product when ingested.
Inhalation	: Exposure to component solvent vapor 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. Narcotic in high concentrations. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath.
Skin contact	: Since the product is poorly absorbed, no hazardous properties are to be anticipated. However, in light of good industrial hygiene, exposure to any chemical should be kept to a minimum. Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.
Eye contact	: This product may irritate eyes upon contact. May cause corneal opacity. Inflammation of the eye is characterized by redness, watering, and itching.
Other toxic effects on humans	: Alcohol consumption before or after exposure may increase adverse effects. Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Acute Data (LD₅₀, LC₅₀) - Toxicity to Test Animals

<u>Ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Butane	LC50	658000 mg/m ³ (4 hour(s))	Inhalation	Rat
	LC50	680000 mg/m ³ (2 hour(s))	Inhalation	Mouse
Naphtha (petroleum), hydrotreated light	LD50	>6000 mg/kg	Oral	Rat
	LD50	>3000 mg/kg	Dermal	Rabbit
	LC50	14 to 35 mg/l (4 hour(s))	Inhalation	Rat
Acetone (Propanon-2)	LD50	5800 mg/kg	Oral	Rat
	LD50	3000 mg/kg	Oral	Mouse
	LD50	5340 mg/kg	Oral	Rabbit
	LD50	20000 mg/kg	Dermal	Rabbit
	LDLo	8000 mg/kg	Oral	Dog
	LC50	50100 mg/m ³ (8 hour(s))	Inhalation	Rat
	LCLo	110000 mg/m ³ (1 hour(s))	Inhalation	Mouse
	LD50	>5000 mg/kg	Oral	Rat
Naphtha (petroleum), hydrotreated light	LD50	>3000 mg/kg	Dermal	Rabbit
	LC50	>50 mg/l (4 hour(s))	Inhalation	Rat
	LD50	4300 mg/kg	Oral	Rat
Xylene (mixture of isomeres)	LD50	2119 mg/kg	Oral	Mouse
	LD50	4300 mg/kg	Oral	Mammal
	LD50	>1700 mg/kg	Dermal	Rabbit
	LDLo	50 mg/kg	Oral	Human/30 min
	LC50	5000 ppm (4 hour(s))	Inhalation	Rat
	LC50	22.1 mg/l (4 hour(s))	Inhalation	Rat
2-Butanonoxime	LD50	2528 mg/kg	Oral	Rat
	LD50	920 to 1840 mg/kg	Dermal	Rat
	LC50	>4416 mg/l (4 hour(s))	Inhalation	Rat

Potential chronic health effects

<u>Ingredient name</u>	<u>Carcinogenic effects</u>	<u>Mutagenic effects</u>	<u>Developmental toxicity</u>	<u>Impairs fertility</u>
2-Butanonoxime	Carc. Cat. 3; R40			

12. Ecological information

There is no data available on the preparation itself.
Do not allow to enter drains or watercourses.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is classified for eco-toxicological properties accordingly. See Sections 2 and 15 for details.

Ecotoxicity data

<u>Ingredient name</u>	<u>Result</u>	<u>Period</u>	<u>Species</u>
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2400 Hard-Hat® Anti-Slip

Naphtha (petroleum), hydrotreated light	Rainbow trout (oncorhynchus mykiss) (LC50)	96 hour(s)	51 mg/l
	daphnia (EC50)	96 hour(s)	>25 mg/l
	Algae (IC50)	72 hour(s)	>1000 mg/l
Acetone (Propanon-2)	daphnia (EC50)	48 hour(s)	39 mg/l
	Rainbow trout (oncorhynchus mykiss) (LC50)	96 hour(s)	5540 mg/l
	Goldfish (carassius auratus) (LC50)	24 hour(s)	11000 mg/l
	Bluegill sunfish (lepomis macrochirus) (LC50)	96 hour(s)	8300 mg/l
	Fathead minnow (pimephales promelas) (LC50)	96 hour(s)	6210 mg/l
Naphtha (petroleum), hydrotreated light	daphnia (LC50)	48 hour(s)	24000 mg/l
	Rainbow trout (oncorhynchus mykiss) (LC50)	96 hour(s)	3 to 10 mg/l
	daphnia (EC50)	96 hour(s)	4.6 to 10 mg/l
	Algae (IC50)	72 hour(s)	10 to 30 mg/l
Xylene (mixture of isomeres)	Oncorhynchus mykiss (LC50)	96 hour(s)	3.3 mg/l
	Oncorhynchus mykiss (LC50)	96 hour(s)	8.2 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	8.6 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	12 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	13.3 mg/l
	Pimephales promelas (LC50)	96 hour(s)	13.4 mg/l
2-Butanonoxime	Pimephales promelas (LC50)	96 hour(s)	843 mg/l
	Daphnia. (EC50)	48 hour(s)	750 mg/l
	Algae. (IC50)	72 hour(s)	83 mg/l

Ingredient name	Persistence/degradability						Bioaccumulative potential		
	BOD ₅	COD	ThOD	Aquatic half-life	Photolysis	Biodegradability	LogP _{ow}	BCF	Potential
Naphtha (petroleum), hydrotreated light	1.56 g O ₂ /g [28 d]	1.6 g O ₂ /g	2.23 g O ₂ /g	< 28 day(s)		Readily	3.9 to 4.9		high
Acetone (Propanon-2)	1.43 g O ₂ /g	1.92 g O ₂ /g				Readily	-0.2		low
Naphtha (petroleum), hydrotreated light	1.56 g O ₂ /g [28 d]	1.6 g O ₂ /g	2.23 g O ₂ /g	< 28 day(s)		Readily	3.9 to 4.9		high
Xylene (mixture of isomeres)	387000 mg/l	430000 mg/l				Not readily	3.2		high
2-Butanonoxime						Readily	0.59		low

Mobility : Volatile.

13. Disposal considerations

Do not allow to enter drains or watercourses.
Dispose of according to all federal, state and local applicable regulations.

Methods of disposal ; : Type: Hazardous chemical waste.
Waste of residues ; Location: European Union
Contaminated packaging Classification: H12 (Compressed or liquefied gases, flammable, N.O.S.)
Disposal.: via recycling
Storage: * (Storage of controlled substances must comply with applicable regulatory security requirements, Flammable materials should be stored in a separate safety storage cabinet or room. Exclude sources of ignition and ventilate the area. Provide general or local exhaust ventilation. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Outside or detached storage is preferred.)
Recycling: * (via metal recovery)

European waste catalogue (EWC) : 200122

14. Transport information

International transport regulations

Regulatory Information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
ADR/RID Class	1950	AEROSOLS, flammable Limited quantity	2			<u>Hazard identification number</u> 23 <u>Limited quantity</u> LQ2 <u>CEPIC Tremcard</u> 20G53 <u>Remarks</u> Limited Quantity - ADR/IMDG 3.4.6
IMDG Class	1950	AEROSOLS, flammable Limited quantity	2.1			<u>Emergency schedules (EmS)</u> F-D, S-U <u>Remarks</u> Limited Quantity - ADR/IMDG 3.4.6
IATA-DGR Class	1950	AEROSOLS, flammable	2.1			<u>Quantity limitation - Passenger Aircraft - Limited quantity</u> 30 kg <u>Quantity limitation - Passenger Aircraft</u> 75 kg <u>Quantity limitation - Cargo Aircraft</u> 150 kg <u>Packaging instruction</u> 203 (<6 bar @ 20°C)

15. Regulatory information

EU Regulations

: The product is labelled as follows, in accordance with local regulations:

Hazard symbol(s)

:



Extremely flammable

Risk Phrases

: R12- Extremely flammable.
R66- Repeated exposure may cause skin dryness or cracking.
R67- Vapors may cause drowsiness and dizziness.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases

: S2- Keep out of the reach of children.
S23- Do not breathe vapor or spray.
S24- Avoid contact with skin.
S51- Use only in well-ventilated areas.
S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

Product use

: Classification and labeling have been performed according to EU directives 67/548/EEC, 1999/45/EC including amendments and the intended use.
- Consumer applications, Industrial applications, Used by Spraying.

Other EU regulations

Additional warning phrases

: Pressurized container: protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition. - Do not smoke. Contains (2-Butanone oxime). May produce an allergic reaction.

Tactile warning of danger

: Yes, applicable.

Restriction to market directive

: Not applicable.

EC Statistical : 3208 10 90
classification (Tariff
Code)

16. Other information

Full text of R-phrases appearing in section 2: : R12- Extremely flammable.
R11- Highly flammable.
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.
R36- Irritating to eyes.
R38- Irritating to skin.
R41- Risk of serious damage to eyes.
R43- May cause sensitization by skin contact.
R66- Repeated exposure may cause skin dryness or cracking.
R67- Vapors may cause drowsiness and dizziness.
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.

Designation of symbols in Section 2 : F+ - Extremely flammable
F - Highly flammable
Carc. Cat.3 - Carcinogen Category 3
Xn - Harmful
Xi - Irritant
N - Dangerous for the environment.

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