



# SAFETY DATA SHEET

2400 Hard-Hat® Anti-Slip

## 1. Identification of the preparation and of the company

**Product name and/or code** : 2400 Hard-Hat® Anti-Slip  
**Product use** : Andrews Coatings Ltd. Carver Building, Littles Lane  
**Manufacturer** : Wolverhampton, West Midlands, WV1 1JY  
 Telephone Number: 01902 429190, Fax Number: 01902 426574  
**Emergency phone:** : Email: sales@andrewscoatings.co.uk

## 2. Composition/information on ingredients

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC.

Chemical name*	CAS no.	%	EC nr.	Classification
<b>United Kingdom (UK)</b>				
Butane	106-97-8	10 - 25	203-448-7	F+; R12
Naphtha (petroleum), hydrotreated heavy	64742-48-9	10 - 25	265-150-3	R10 Xn; R65 R66, R67
Acetone (Propanon-2)	67-64-1	5 - 10	200-662-2	F; R11 Xi; R36 R66, R67
Naphtha (petroleum), hydrotreated light	64742-49-0	2.5 - 5	265-151-9	F; R11 Xn; R65 R66, R67 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 limits, 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** : F+; R12  
R66, R67  
R52/53

**Physical/chemical hazards** : Extremely flammable.

**Human health hazards** : Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness.

**Environmental hazards** : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Additional warning phrases** : Pressurized container: protect from sunlight and do not expose to temperatures 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 - No smoking.  
Contains 2-butanonoxime. May cause allergic reaction.

## 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 breathing is irregular or if 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.

## 4. First aid measures

- 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.

## 5. Fire-fighting measures

- Extinguishing media** : Recommended: alcohol-resistant foam, CO<sub>2</sub>, powders, water spray.  
Not to be used : water jet.
- 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.
- Hazardous combustion products** : Decomposition products may include the following materials:  
carbon oxides  
metal oxide/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 material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Do not allow to enter drains or watercourses. Preferably clean with a detergent. Avoid using 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.

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.

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. 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 the following temperature: 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 have been opened must be carefully resealed and kept upright to prevent leakage.

Do not empty into drains.

## 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.

## 8. Exposure controls/personal protection

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
<b>United Kingdom (UK)</b>	
Butane	<b>EH40-WEL (United Kingdom (UK), 1/2005).</b> STEL: 1810 mg/m <sup>3</sup> 15 minute(s). Form: All forms STEL: 750 ppm 15 minute(s). Form: All forms TWA: 1450 mg/m <sup>3</sup> 8 hour(s). Form: All forms TWA: 600 ppm 8 hour(s). Form: All forms
Naphtha (petroleum), hydrotreated heavy	<b>EH40-WEL (United Kingdom (UK), 6/2005). Notes: as Turpentine</b> STEL: 850 mg/m <sup>3</sup> , 0 times per shift, 15 minute(s). STEL: 150 ppm, 0 times per shift, 15 minute(s). <b>EH40-WEL (United Kingdom (UK), 6/2005). Notes: as Turpentine</b> TWA: 566 mg/m <sup>3</sup> , 0 times per shift, 8 hour(s). TWA: 100 ppm, 0 times per shift, 8 hour(s).
Acetone (Propanon-2)	<b>EH40-WEL (United Kingdom (UK), 1/2005).</b> STEL: 3620 mg/m <sup>3</sup> 15 minute(s). Form: All forms STEL: 1500 ppm 15 minute(s). Form: All forms TWA: 1210 mg/m <sup>3</sup> 8 hour(s). Form: All forms TWA: 500 ppm 8 hour(s). Form: All forms
Naphtha (petroleum), hydrotreated light	<b>EH40-WEL (United Kingdom (UK), 6/2005). Notes: as Turpentine</b> STEL: 850 mg/m <sup>3</sup> , 0 times per shift, 15 minute(s). STEL: 150 ppm, 0 times per shift, 15 minute(s). <b>EH40-WEL (United Kingdom (UK), 6/2005). Notes: as Turpentine</b> TWA: 566 mg/m <sup>3</sup> , 0 times per shift, 8 hour(s). TWA: 100 ppm, 0 times per shift, 8 hour(s).
Xylene (mixture of isomeres)	<b>EH40-WEL (United Kingdom (UK), 1/2005). Skin</b> STEL: 441 mg/m <sup>3</sup> 15 minute(s). Form: All forms STEL: 100 ppm 15 minute(s). Form: All forms TWA: 220 mg/m <sup>3</sup> 8 hour(s). Form: All forms TWA: 50 ppm 8 hour(s). Form: All forms

### Exposure controls

- Occupational exposure controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : Recommended: organic vapor (Type A) and particulate filter (EN 140) .
- Hand protection** : >8 hours (breakthrough time): For prolonged or repeated handling, use the following type of gloves: nitrile rubber or neoprene (EN 374-1)
- Eye protection** : Recommended: safety glasses with side-shields (EN 166) .
- Skin protection** : Recommended: disposable overall .
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Environmental exposure controls

Do not allow to enter drains or watercourses.

## 9. Physical and chemical properties

- Physical state** : Liquid. [Spraycans]
- Odor** : Solvent-like.
- Color** : Depending on productnumber
- Flash point** : Closed cup: -70°C (-94°F)
- Boiling point** : -40°C (-40°F)
- Explosion limits** : Lower: 2%  
Upper: 9%
- Vapor pressure** : 400 kPa (3000 mm Hg)
- Vapor density** : >1 [Air = 1]

## 9. Physical and chemical properties

<b>Evaporation rate (butyl acetate = 1)</b>	: >1 (Butyl acetate. = 1)
<b>Volatility %</b>	: 83 to 86% (v/v), 71 to 76% (w/w)
<b>VOC content w/w</b>	: 530 to 550 (g/l).
<b>Solubility</b>	: Soluble in the following materials: acetone. Partially soluble in the following materials: methanol. Very slightly soluble in the following materials: diethyl ether. Insoluble in the following materials: cold water, hot water and n-octanol.
<b>Relative density</b>	: 0.7 to 0.75

## 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 sections 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 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.

Contains 2-butanonoxime. May cause allergic reaction.

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Butane	LC50 Inhalation Gas.	Mouse	680000 mg/m <sup>3</sup>	2 hours
	LC50 Inhalation Gas.	Rat	658000 mg/m <sup>3</sup>	4 hours
Naphtha (petroleum), hydrotreated heavy	LD50 Dermal	Rabbit	>3000 mg/kg	-
	LD50 Oral	Rat	>6000 mg/kg	-
	LC50 Inhalation Vapor	Rat	14 to 35 mg/L	4 hours
Acetone (Propanon-2)	LD50 Dermal	Rabbit	20000 mg/kg	-
	LD50 Oral	Rat	5800 mg/kg	-
	LD50 Oral	Rabbit	5340 mg/kg	-
	LD50 Oral	Rabbit	5340 mg/kg	-
	LDLo Oral	Dog	8000 mg/kg	-
	LC50 Inhalation Vapor	Rat	50100 mg/m <sup>3</sup>	8 hours
Naphtha (petroleum), hydrotreated light	LCLo Inhalation Vapor	Mouse	110000 mg/m <sup>3</sup>	1 hours
	LD50 Dermal	Rabbit	>3000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Xylene (mixture of isomeres)	LC50 Inhalation Vapor	Rat	>50 mg/L	4 hours
	LD50 Dermal	Rabbit	>1700 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
2-Butanonoxime	LC50 Inhalation Vapor	Rat	5000 ppm	4 hours
	LD50 Dermal	Rat	920 to 1840 mg/kg	-
	LD50 Oral	Rat	930 mg/kg	-
	LC50 Inhalation Vapor	Rat	>4416 mg/L	4 hours

## 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.

### Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Naphtha (petroleum), hydrotreated heavy	-	Acute EC50 >25 mg/L	Daphnia	96 hours
	-	Acute IC50 >1000 mg/L	Algae	72 hours
	-	Acute LC50 51 mg/L	Fish - Rainbow trout (oncorhynchus mykiss)	96 hours
Acetone (Propanon-2)	Intoxication	Acute EC50 13500 mg/L	Daphnia - Daphnia magna	48 hours
	Behavior	Acute EC50 8990 mg/L	Fish - Fathead minnow (pimephales promelas)	48 hours
	Intoxication	Acute EC50 23.5 mg/L	Daphnia - Daphnia magna	48 hours
	Mortality	Acute LC50 >100 mg/L	Daphnia - Daphnia magna	96 hours
	Mortality	Acute LC50 >100 mg/L	Fish - Fathead minnow (pimephales promelas)	96 hours
Naphtha (petroleum), hydrotreated light	Mortality	Acute LC50 5540 mg/L	Fish - Rainbow trout (oncorhynchus mykiss)	96 hours
	-	Acute EC50 4.6 to 10 mg/L	Daphnia	96 hours
	-	Acute IC50 10 to 30 mg/L	Algae	72 hours
Xylene (mixture of isomeres)	-	Acute LC50 3 to 10 mg/L	Fish - Rainbow trout (oncorhynchus mykiss)	96 hours
	Mortality	Acute LC50 13.4 mg/L	Fish - Fathead minnow (pimephales promelas)	96 hours
	Mortality	Acute LC50 12 mg/L	Fish - Bluegill sunfish (lepomis macrochirus)	96 hours
2-Butanonoxime	Mortality	Acute LC50 8.2 mg/L	Fish - Rainbow trout (oncorhynchus mykiss)	96 hours
	-	Acute EC50 750 mg/L	Daphnia	48 hours
	Mortality	Acute IC50 83 mg/L	Algae	72 hours
		Acute LC50 843 mg/L	Fish - Fathead minnow (pimephales promelas)	96 hours

### Ecological information

#### Biodegradability

Product/ingredient name	Test	Result	Dose	Inoculum
Naphtha (petroleum), hydrotreated heavy	-	97.5 % - Readily - 28 days	-	-
Naphtha (petroleum), hydrotreated light	-	97.5 % - Readily - 28 days	-	-
Xylene (mixture of isomeres)	-	90 % - Readily - 5 days	-	-

#### Product/ingredient name

Naphtha (petroleum), hydrotreated heavy  
Acetone (Propanon-2)  
Naphtha (petroleum), hydrotreated light  
Xylene (mixture of isomeres)  
2-Butanonoxime

#### Aquatic half-life

< 28 day(s)  
-  
< 28 day(s)  
-  
-

#### Photolysis

-  
-  
-  
-  
-

#### Biodegradability

Readily  
Readily  
Readily  
Readily  
Readily

#### Bioaccumulative potential

#### Product/ingredient name

Naphtha (petroleum), hydrotreated heavy  
Acetone (Propanon-2)  
Naphtha (petroleum), hydrotreated light  
Xylene (mixture of isomeres)  
2-Butanonoxime

#### LogP<sub>ow</sub>

3.9 to 4.9  
-0.2  
3.9 to 4.9  
3.2  
0.59

#### BCF

-  
-  
-  
-  
-

#### Potential

high  
low  
high  
high  
low

## 13. Disposal considerations

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

**European waste catalogue (EWC)** : The European Waste Catalogue classification of this product, when disposed of as waste, is: 20 01 27\* paint, inks, adhesives and resins containing 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.

**Hazardous waste** : Yes.


## 14. Transport information

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### International transport regulations

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>ADR/RID Class</b>	1950	AEROSOLS, flammable Limited quantity (butane)		-		<b><u>Hazard identification number</u></b> 23  <b><u>Limited quantity</u></b> LQ2  <b><u>CEPIC Tremcard</u></b>

## 14. Transport information

						20G53 <b>Remarks</b> Limited Quantity - ADR/IMDG 3.4.6
<b>IMDG Class</b>	1950	AEROSOLS, flammable Limited quantity		-		<b>Emergency schedules (EmS)</b> F-D, S-U  <b>Remarks</b> Limited Quantity - ADR/IMDG 3.4.6
<b>IATA Class</b>	1950	AEROSOLS, flammable		-		<b>Passenger and Cargo Aircraft</b> Quantity limitation: 75 kg <b>Cargo Aircraft Only</b> Quantity limitation: 150 kg  <b>Limited Quantities - Passenger Aircraft</b> Quantity limitation: 30 kg <b>Packaging instructions:</b> 203 (<6 bar @ 20°C)

PG\* : Packing group

## 15. Regulatory information

**EU regulations** : The product is classified and labelled for supply in accordance with the Directive 1999/45/EC as follows:

**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.  
S56- Dispose of this material and its container at hazardous or special waste collection point.

**Additional warning phrases** :

: Pressurized container: protect from sunlight and do not expose to temperatures 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 - No smoking.  
Contains 2-butanonoxime. May cause allergic reaction.

**National regulations**

## 16. Other information

**CEPE Classification** : 1

**Full text of R-phrases referred to in sections 2 and 3 - United Kingdom (UK)**

: 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.

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**16. Other information**

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.

The information in this Safety Data Sheet is required pursuant to EU Directive 91/155/EEC and its amendments.

**Notice to reader**

*The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties. ©Copyright by Rust-Oleum Netherlands B.V. / Martin Mathys B.V.*



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