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Safety Data Sheet

According to U.S.A. Federal Hazcom 2012

1. Identification	
1.1. Product identifier Code: Product name	Armus_GA_140721-001D Deck Guard UV
1.2. Relevant identified uses of the substance or mixture	and uses advised against
Intended use Water-based polyurethane varnish for	or protection of wood surfaces from UV radiation.
1.3. Details of the supplier of the safety data sheet	
Name	Armus LLC
Full address	137 Grand Street 3rd floor NY
District and Country	NY 10013
	United States
	Tel. (+1) 9179575383
e-mail address of the competent person	
responsible for the Safety Data Sheet	bill@armussolutions.com
1.4. Emergency telephone number	
For urgent inquiries refer to	Tel. (+1) 9179575383 United States
2 Hazardt identification	

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200). The product thus requires a safety datasheet.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet. Hazard pictograms:

Skin sensitization, category 1A May cause an allergic skin reaction.

Signal words:

WARNING





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Deck Guard UV

Hazard statements:

H317

May cause an allergic skin reaction.

Precautionary statements:

Prevention:

P26	51	Avoid breathing fume, mist or spray.		
P28	30	Wear protective gloves.		
P27	72	Contaminated work clothing should not be allowed out of the workplace.		
Response:				
P33	33+P313	If skin irritation or rash occurs: Get medical advice / attention.		
P30	02+P352	IF ON SKIN: Wash with plenty of water		
P36	53	Wash contaminated clothing before reuse.		
Storage:				

Disposal:

P501

Dispose of contents or container according to local/national/international regulations.

2.2 Other hazards

Environmental classification as for Reg. (EU) 1272/2008 (CLP): The product is classified as hazardous for environment pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP).

Classification and Hazard Statement Hazardous to the aquatic environment, chronic toxicity, category 3

Harmful to aquatic life with long lasting effects.

Hazard statements:

H412

Harmful to aquatic life with long lasting effects.

Precautionary statements:

Prevention: P273

Avoid release to the environment.

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Response:
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Storage:

Disposal: **P501**

Dispose of contents or container according to local/national/international regulations

Additional hazards

Contains: COBALT BIS 2-ETHYL HEXANOATE May produce an allergic reaction.

3.1. Mixtures		
Contains:		
Identification	Conc. %	Classification:
ALPHA-3-(3-(2H-BENZOTRIAZOL-2-YL)-5-TERT-BUTYL-4-	0.5	Skin sensitization, category 1 H317, Hazardous to the
HYDROXY-PHENYL)PROPIONYL-OMEGA-		aquatic environment, chronic toxicity, category 2
HYDROXYPOLY(OXYETHYLENE		H411
CAS 104810-48-2		
EC 400-830-7		
INDEX		
ALPHA-3-(2H-BENZOTRIAZOL-2-YL)-5-TERT-BUTYL-4-	0.35	Skin sensitization, category 1 H317, Hazardous to the
HYDROXYPHENYL-PROPIONYL-OMEGA-3-(3-(2H-		aquatic environment, chronic toxicity, category 2
BENZOTRIAZOL-2-YL)-5-TERT-BUTYL-4-		H411
HYDROXYPHENYL)PROPIONYLOXYPOLY(OXYETHYLENE)	
CAS 104810-47-1	-	
EC 400-830-7		
INDEX -		
Mixture of 5-chloro-2-methyl-2H- isothiazol-3-one	0.003	Acute toxicity, category 2 H310, Acute toxicity,
and 2-methyl-2H-isothiazol-3-one		category 2 H330, Acute toxicity, category 3 H301,
CAS 55965-84-9		Skin corrosion, category 1C H314, Serious eye
EC		damage, category 1 H318, Skin sensitization,
INDEX 613-167-00-5		category 1A H317, Hazardous to the aquatic
		environment, acute toxicity, category 1 H400
		M=100, Hazardous to the aquatic environment,
		chronic toxicity, category 1 H410 M=100

The full wording of hazard (H) phrases is given in section 16 of the sheet.

4. First-aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorized by a doctor.



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INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

4.3. Indication of any immediate medical attention and special treatment needed

Information not available

5. Fire-fighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder, and water spray. UNSUITABLE EXTINGUISHING EQUIPMENT None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal firefighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.



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6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapors may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a cool and well-ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

8. Exposure controls / personal protection

8.1. Control parameters

Regulatory References: Information not available.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must comply with current regulations.

HAND PROTECTION

Protect hands with category III work gloves (OSHA 29 CFR 1910.138).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability. The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear. Wash body with soap and water after removing protective clothing.



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EYE PROTECTION

Wear airtight protective goggles (OSHA 29 CFR 1910.133).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose limit of use will be defined by the manufacturer (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134). In the presence of gases or vapors of various kinds and/or gases or vapors containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odorless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84, OSHA 29 CFR 1910.134.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

7.1. momunon on basic physical and chemical properties				
Liquid				
Not available				
Not available				
Not available				
8.5				
Not available				
Not available				
Not available				
>93 °C				
Not available				



Explosive properties Oxidizing properties Not available Not available

9.2. Other information

Information not available.

10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

DIPROPYLENE GLYCOL MONOMETHYL EHTER Forms peroxides with: air.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

DIPROPYLENE GLYCOL MONOMETHYL EHTER

May react violently with: strong oxidizing agents.

10.4. Conditions to avoid

None in particular. However, the usual precautions used for chemical products should be respected.

DIPROPYLENE GLYCOL MONOMETHYL EHTER Avoid exposure to: sources of heat.

Possibility of explosion.

10.5. Incompatible materials

Information not available.

10.6. Hazardous decomposition products

Information not available.

11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects

<u>Metabolism, toxicokinetics, mechanism of action and other information</u> Information not available First compilation

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Information on likely routes of exposure 2-(2-BUTOXYETHOXY) ETHANOL WORKERS: inhalation; contact with the skin.

ETHYLBENZENE

WORKERS: inhalation; contact with the skin. POPULATION: ingestion of contaminated food or water; contact with the skin of products containing the substance.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

2-(2-BUTOXYETHOXY) ETHANOL

May be absorbed by inhalation, ingestion and skin contact; is irritating for the skin and especially for the eyes. May cause damage to the spleen. At room temperature the danger of inhalation is unlikely, due to the low vapour pressure of the substance.

ETHYLBENZENE

As the counterparts of benzene, may have an acute effect on the central nervous system, with depression, narcosis, often preceded by dizziness and associated with headache (Ispesl). Is irritating for skin, conjunctiva and respiratory tract.

Interactive effects

Information not available

ACUTE TOXICITY MIXTURE OF 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE AND 2-METHYL-2H-ISOTHIAZOL-3-ONE LC50 (Inhalation) 0.51 mg/l/4h Rat

SKIN CORROSION / IRRITATION Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Causes eye damage.

RESPIRATORY OR SKIN SENSITISATION Sensitizing for the skin. Contains: COBALT BIX 2-ETHYL HEXANOATE May produce an allergic reaction.

<u>GERM CELL MUTAGENICITY</u> Does not meet the classification criteria for this hazard class



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CARCINOGENICITY

Does not meet the classification criteria for this hazard class Carcinogenicity Assessment: 121-44-8TRIETHYLAMINE ACGIH:: A4

136-52-7COBALT BIS 2-ETHYL HEXANOATE ACGIH:: A3

100-41-4ETHYLBENZENE ACGIH:: A3 IARC:2B

ETHYLBENZENE

Classified in Group 2B (possible human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 2000). Classified in Group D (not classifiable as a human carcinogen) by the US Environmental Protection Agency (EPA) - (US EPA file online 2014).

<u>REPRODUCTIVE TOXICITY</u> Does not meet the classification criteria for this hazard class

<u>STOT - SINGLE EXPOSURE</u> Does not meet the classification criteria for this hazard class

<u>STOT - REPEATED EXPOSURE</u> Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD Does not meet the classification criteria for this hazard class

12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

MIXTURE OF 5-CHLORO-2METHYL-2H-ISOTHIAZOL-3-ONE AND 2-METHYL-2H-ISOTHIAZOL-3-ONELCD50 - for Fish0.58 mg/l/96hEC50 - for Crustacea1.02 mg/l/48h

12.2. Persistence and degradability

DIPROPYLENE GLYCOL MONOMETHYL ETHER Solubility in water 1000-10,000 mg/l Rapidly degradable



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12.3. Bioaccumulative potential

DIPROPYLENE GLYCOL MONOMETHYL ETHER Partition coefficient: n-octanol/water0.81 0.0043

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0.1%.

12.6. Other adverse effects

Information not available

13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Neat product residues should be considered special non-hazardous waste. Disposal must be performed through an authorized waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number

Not applicable

14.2. UN proper shipping name Not applicable

14.3. Transport hazard class(es) Not applicable

14.4. Packing group Not applicable

14.5. Environmental hazards

Not applicable





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No component(s) listed.



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EPCRA 304 EHS RQ: No component(s) listed. CERCLA RQ: 121-44-8 TRIETHYLAMINE EPCRA 313 TRI: 34590-94-8 DIPROPYLENE GLYCOL MONOMETHYL ETHER (GLYCOL ETHERS) 121-44-8 TRIETHYLAMINE RCRA Code: 121-44-8 TRIETHYLAMINE CAA 112 (r) RMP TQ: No component(s) listed. State Regulations Massachusetts: 34590-94-8 DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers) 121-44-8 TRIETHYLAMINE 8002-74-2 WAX Minnesota: 34590-94-8 DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers) 121-44-8 TRIETHYLAMINE 57-55-6 1.2-PROPANEDIOL 8002-74-2 WAX New Jersey: DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers) 34590-94-8 121-44-8 TRIETHYLAMINE 57-55-6 1.2-PROPANEDIOL 8002-74-2 WAX New York: TRIETHYLAMINE 121-44-8 Pennsylvania: 34590-94-8 DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers) 121-44-8 TRIETHYLAMINE 1.2-PROPANEDIOL 57-55-6 8002-74-2 WAX



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California:

34590-94-8	
121-44-8	
8002-74-2	

DIPROPYLENE GLYCOL MONOMETHYL ETHER (Glycol ethers) TRIETHYLAMINE WAX

Proposition 65:

This product does not contain any substances known to the State of California to cause cancer, reproductive harm or birth defects.

International Regulations Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012: None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

- H310 Fatal in contact with skin.
- H330 Fatal if inhaled.
- H301 Toxic if swallowed.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- 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.

LEGEND:

- 313 CATEGORY CODE: Emergency Planning and Community Right-to Know Act Section 313 Category Code

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAA 112 ® RMP TQ: Risk Management Plan Threshold Quantity (Clean Air Act Section 112®)
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CERCLA RQ: Reportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act)
- CLP: EC Regulation 1272/2008
- DEA: Drug Enforcement Administration
- EmS: Emergency Schedule
- EPA: US Environmental Protection Agency
- EPCRA: Emergency Planning and Community Right-to Know Act
- EPCRA 302 EHS TPQ: Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)
- EPCRA 304 EHS RQ: Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)



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- EPCRA 313 TRI: Toxics Release Inventory (Section 313 Category Code)
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PEL: Predicted exposure level
- RCRA Code: Resource Conservation and Recovery Act Code
- REL: Recommended exposure limit
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TSCA: Toxic Substances Control Act
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- WHMIS: Workplace Hazardous Materials Information System.

GENERAL BIBLIOGRAPHY:

- GHS rev. 3
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh Registry of Toxic Effects of Chemical Substances
- INRS Fiche Toxicologique (toxicological sheet)
- Patty Industrial Hygiene and Toxicology
- N.I. Sax Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website
- Database of SDS models for chemicals Ministry of Health and ISS (Istituto Superiore di Sanità) Italy
- 6 NYCRR part 597
- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act
- EPA website
- Hazard Communication Standard (HCS 2012)
- IARC website
- List Of Lists EPA: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112® of the Clean Air Act
- Massachusetts 105 CMR Department of public health 670.000: "Right to Know"
- Minnesota Chapter 5206 Department of Labor and Industry Hazardous Substances, Employee "Right to Know".
- New Jersey Worker and Community Right to know Act N.J.S.A.
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Pennsylvania, Hazardous Substance List, Chapter 323



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Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses. Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION

Product classification derives from criteria established by the OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200), unless determined otherwise in Section 11 and 12. The data for evaluation of chemical-physical properties are reported in section 9.

