

## ZINC PHOSPHATE J0852

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

## SECTION 1. IDENTIFICATION

Product name : ZINC PHOSPHATE J0852

**Manufacturer or supplier's details**

Company name of supplier : Venator Americas LLC  
Address : 10001 Woodloch Forest Drive  
The Woodlands,  
TX 77380  
United States of America (USA)  
Telephone : (001) 844 831 6720  
Telefax : (001) 281 465 6731

E-mail address of person responsible for the SDS : msds@venatorcorp.com

Emergency telephone number : USA & Canada: +1-800-424-9300 Other Americas: +1-703-741-5970 [CCN 820025]

**Recommended use of the chemical and restrictions on use**

Recommended use : Industrial use  
Colouring agents, pigments

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

**GHS label elements**

Hazard pictograms :



Signal word : Warning

Hazard statements : H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P273 Avoid release to the environment.  
**Response:**  
P391 Collect spillage.  
**Storage:**  
Not available

## ZINC PHOSPHATE J0852

Version 5.0      Revision Date: 10/06/2021      SDS Number: 400000005083      Date of last issue: 12/18/2020  
Date of first issue: 01/24/2017

**Disposal:**

P501 Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

**Other hazards**

Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Substance

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
trizinc bis(orthophosphate)	7779-90-0	90 - 100

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

**SECTION 4. FIRST AID MEASURES**

- General advice : Consult a physician. Do not leave the victim unattended.
- If inhaled : If breathed in, move person into fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : Wash off with soap and water.  
Call a physician if irritation develops or persists.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Rinse mouth with water.  
If material has been swallowed and the exposed person is conscious, give small quantities of water to drink.  
DO NOT induce vomiting unless directed to do so by a physician or poison control center.  
Keep respiratory tract clear.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Dust contact with the eyes can lead to mechanical irritation.  
Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough.  
The product is not irritant but as with all fine powders can absorb moisture and natural oils from the surface of the skin during prolonged exposure.

**ZINC PHOSPHATE J0852**

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

Individuals with sensitive skin may experience skin drying on prolonged or repeated exposure.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

Notes to physician : Treat symptomatically.

**SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water spray  
Foam  
Dry powder  
Carbon dioxide (CO<sub>2</sub>)

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Cool closed containers exposed to fire with water spray.  
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Hazardous combustion products

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : Standard procedure for chemical fires.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Ensure adequate ventilation.  
Avoid dust formation.  
Remove all sources of ignition.  
Never return spills in original containers for re-use.  
Treat recovered material as described in the section "Disposal considerations".  
For disposal considerations see section 13.

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.  
Sweep up or vacuum up spillage and collect in suitable container for disposal.  
Avoid creating dusty conditions and prevent wind dispersal.

**ZINC PHOSPHATE J0852**

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

Clean contaminated floors and objects thoroughly while observing environmental regulations.

**SECTION 7. HANDLING AND STORAGE**

- Advice on protection against fire and explosion : Avoid dust formation.  
Provide appropriate exhaust ventilation at places where dust is formed.
- Advice on safe handling : Minimize dust generation and accumulation.  
Avoid formation of respirable particles.  
Avoid inhalation, ingestion and contact with skin and eyes.  
Avoid exposure - obtain special instructions before use.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage stability : Keep in a dry place.  
No decomposition if stored and applied as directed.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

- Engineering measures** : Maintain air concentrations below occupational exposure standards.

**Personal protective equipment**

- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
- Hand protection : For prolonged or repeated contact use protective gloves.  
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles
- Skin and body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Protective measures : Wear suitable protective equipment.
- Hygiene measures : Wash hands before breaks and immediately after handling the product.

**ZINC PHOSPHATE J0852**

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

Remove contaminated clothing and protective equipment before entering eating areas.  
Barrier creams may help to protect the exposed areas of skin, they should however not be applied once exposure has occurred.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: powder
Colour	: white
Odour	: odourless
Odour Threshold	: No data is available on the product itself.
pH	: 6 - 8Concentration: 10 %
Melting point	: > 1,832 °F / > 1,000 °C
Boiling point	: No data is available on the product itself.
Flash point	: No data is available on the product itself.
Evaporation rate	: No data is available on the product itself.
Flammability (solid, gas)	: No data is available on the product itself.
Flammability (liquids)	: No data is available on the product itself.
Upper explosion limit / Upper flammability limit	: No data is available on the product itself.
Lower explosion limit / Lower flammability limit	: No data is available on the product itself.
Vapour pressure	: No data is available on the product itself.
Relative vapour density	: No data is available on the product itself.
Relative density	: No data is available on the product itself.
Density	: No data is available on the product itself.
Solubility(ies)	
Water solubility	: slightly soluble
Solubility in other solvents	: No data is available on the product itself.
Partition coefficient: n-octanol/water	: No data is available on the product itself.
Auto-ignition temperature	: No data is available on the product itself.
Thermal decomposition	: No data is available on the product itself.
Viscosity	: No data is available on the product itself.
Explosive properties	: No data is available on the product itself.

**ZINC PHOSPHATE J0852**

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

Oxidizing properties : No data is available on the product itself.

Particle size : No data is available on the product itself.

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : No dangerous reaction known under conditions of normal use.  
Chemical stability : The product is chemically stable.  
Possibility of hazardous reactions : Stable under recommended storage conditions.  
No hazards to be specially mentioned.

Conditions to avoid : No data available  
Incompatible materials : None known.  
Hazardous decomposition products : No decomposition if stored and applied as directed.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : No data is available on the product itself.

**Acute toxicity****Components:**

trizinc bis(orthophosphate):

Acute oral toxicityComponents : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401

**Components:**

trizinc bis(orthophosphate):

Acute inhalation toxicity : LC50 (Rat, male and female): > 5,410 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403

Acute dermal toxicity : No data available

Acute toxicity (other routes of administration) : No data available

**Skin corrosion/irritation****Components:**

trizinc bis(orthophosphate):

Species: Rabbit

Result: No skin irritation

**Serious eye damage/eye irritation****Components:**

**ZINC PHOSPHATE J0852**

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

trizinc bis(orthophosphate):  
Species: Rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405

**Respiratory or skin sensitisation****Components:**

trizinc bis(orthophosphate):  
Exposure routes: Skin  
Species: Guinea pig  
Method: Maximisation Test  
Result: Not a skin sensitizer.

Assessment: No data available

**Germ cell mutagenicity****Components:**

trizinc bis(orthophosphate):  
Genotoxicity in vitro : Test system: mouse lymphoma cells  
Result: negative

**Components:**

trizinc bis(orthophosphate):  
Genotoxicity in vivo : Test Type: Micronucleus test  
Species: Mouse (male and female)  
Exposure time: 30 h  
Method: Mutagenicity (in vivo mammalian bone-marrow  
cytogenetic test, chromosomal analysis)  
Result: negative

**Carcinogenicity****Components:**

trizinc bis(orthophosphate):  
Species: Mouse, male and female  
Activity duration: 1 yr  
NOAEL: > 22,000

Carcinogenicity -  
Assessment : No data available

**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

## ZINC PHOSPHATE J0852

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity****Components:**

trizinc bis(orthophosphate):  
Effects on fertility

: Species: Rat, male and female  
Frequency of Treatment: 140 daily  
General Toxicity - Parent: No observed adverse effect level:  
7.5 mg/kg body weight  
Method: OECD Test Guideline 416  
Result: negative

**Components:**

trizinc bis(orthophosphate):  
Effects on foetal  
development

: Species: Other, female  
Teratogenicity: No observed adverse effect level: 88 mg/kg  
body weight  
Result: No teratogenic effects

Reproductive toxicity -  
Assessment

: No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

**Repeated dose toxicity****Components:**

trizinc bis(orthophosphate):  
Species: Rat, male and female  
NOEL: 234 mg/kg  
Application Route: Oral  
Exposure time: 13 w  
Method: OECD Test Guideline 408

Species: Rat, male  
Application Route: Inhalation  
Exposure time: 16 w  
Remarks: No adverse effect has been observed in chronic toxicity tests.

Repeated dose toxicity -  
Assessment

: No data available

**Aspiration toxicity**

No data available

**ZINC PHOSPHATE J0852**

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

**Experience with human exposure**

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

**Toxicology, Metabolism, Distribution**

No data available

**Neurological effects**

No data available

**Further information****Product:**

Remarks: No data available

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity**Toxicity to fish - Product : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.14 - 0.26 mg/l  
Exposure time: 96 hToxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0.04 - 0.86 mg/l  
aquatic invertebrates -  
Product Exposure time: 48 hToxicity to algae/aquatic : EC50 (Selenastrum capricornutum (green algae)): 0.136 -  
plants - Product 0.150 mg/l  
Exposure time: 72 h**Components:**trizinc bis(orthophosphate):  
M-Factor (Acute aquatic : 1  
toxicity)  
1**Components:**trizinc bis(orthophosphate):  
Toxicity to fish (Chronic : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.44 mg/l  
toxicity) Exposure time: 72 d

**ZINC PHOSPHATE J0852**

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

**Components:**

trizinc bis(orthophosphate):

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.031 - 0.208 mg/l  
Exposure time: 50 d

**Components:**

trizinc bis(orthophosphate):

M-Factor (Chronic aquatic toxicity) :

1

**Components:**

trizinc bis(orthophosphate):

Toxicity to microorganisms : EC50 (activated sludge): 5.2 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209

: NOEC (Other): 850 mg/l  
Exposure time: 56 d

Toxicity to soil dwelling organisms : No data available

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial organisms : No data available

Ecotoxicology Assessment

**Components:**

trizinc bis(orthophosphate):

Acute aquatic toxicity : Very toxic to aquatic life.

**Components:**

trizinc bis(orthophosphate):

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

**Persistence and degradability**

Biodegradability - Product : Result: No data available

Biochemical Oxygen Demand (BOD) : No data available

Chemical Oxygen Demand : No data available

## ZINC PHOSPHATE J0852

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

(COD)

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon (DOC) : No data available

Physico-chemical removability : No data available

Stability in water : No data available

Photodegradation : No data available

Impact on Sewage Treatment : No data available

**Bioaccumulative potential**

Bioaccumulation - Product : Remarks: No data available

Partition coefficient: n-octanol/water : No data available

**Mobility in soil**

Mobility : No data available

Distribution among environmental compartments : No data available

Stability in soil : No data available

**Other adverse effects**

Environmental fate and pathways : No data available

Results of PBT and vPvB assessment - Product : Remarks: No data available

Endocrine disrupting potential : No data available

Adsorbed organic bound halogens (AOX) : No data available

**Hazardous to the ozone layer**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82  
Protection of Stratospheric Ozone - CAA Section 602 Class I  
Substances  
Remarks: This product neither contains, nor was

**ZINC PHOSPHATE J0852**

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information - Product : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

Global warming potential : No data available

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

**SECTION 14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(TRIZINC BIS(ORTHOPHOSPHATE))

Class : 9  
Packing group : III  
Labels : 9

**IATA-DGR**

UN/ID No. : UN 3077  
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
(TRIZINC BIS(ORTHOPHOSPHATE))

Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 956  
Packing instruction (passenger aircraft) : 956  
Environmentally hazardous : yes

**IMDG-Code**

UN number : UN 3077

## ZINC PHOSPHATE J0852

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(TRIZINC BIS(ORTHOPHOSPHATE))

Class : 9

Packing group : III

Labels : 9

EmS Code : F-A, S-F

Marine pollutant : yes

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations****49 CFR**

UN/ID/NA number : UN 3077

Proper shipping name : Environmentally hazardous substances, solid, n.o.s.  
(TRIZINC BIS(ORTHOPHOSPHATE))

Class : 9

Packing group : III

Labels : CLASS 9

ERG Code : 171

Marine pollutant : yes(TRIZINC BIS(ORTHOPHOSPHATE))

Remarks : Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

**Special precautions for user**

Remarks : 49CFR: no dangerous good in non-bulk packaging

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**SECTION 15. REGULATORY INFORMATION****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

trizinc bis(orthophosphate)	7779-90-0	>= 90 - <= 100 %
-----------------------------	-----------	---------------------

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

**California Prop. 65**

WARNING: This product can expose you to chemicals including Arsenic (As), Cadmium (Cd), Chromium VI (Cr6+), Cobalt (Co), Lead (Pb), Mercury (Hg) and Nickel (Ni), present as trace impurities and not intentionally added, which is/are known to the State of California to cause

## ZINC PHOSPHATE J0852

Version 5.0      Revision Date: 10/06/2021      SDS Number: 400000005083      Date of last issue: 12/18/2020  
 Date of first issue: 01/24/2017

cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**The components of this product are reported in the following inventories:**

CH INV : On the inventory, or in compliance with the inventory  
 DSL : All components of this product are on the Canadian DSL  
 AIIIC : On the inventory, or in compliance with the inventory  
 NZIoC : On the inventory, or in compliance with the inventory  
 ENCS : On the inventory, or in compliance with the inventory  
 KECI : On the inventory, or in compliance with the inventory  
 PICCS : On the inventory, or in compliance with the inventory  
 IECSC : On the inventory, or in compliance with the inventory  
 TCSI : On the inventory, or in compliance with the inventory  
 TSCA : All substances listed as active on the TSCA inventory

**Inventories**

AIIIC (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TECI (Thailand), TSCA (USA)

**TSCA - 5(a) Significant New Use Rule List of Chemicals**

No substances are subject to a Significant New Use Rule.

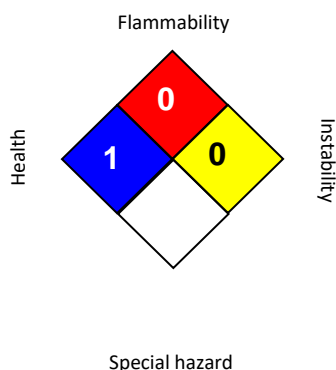
**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**

No substances are subject to TSCA 12(b) export notification requirements.

**SECTION 16. OTHER INFORMATION**

**Further information**

**NFPA 704:**



**HMIS® IV:**

<b>HEALTH</b>	*	1
<b>FLAMMABILITY</b>		0
<b>PHYSICAL HAZARD</b>		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to

## ZINC PHOSPHATE J0852

Version	Revision Date:	SDS Number:	Date of last issue: 12/18/2020
5.0	10/06/2021	400000005083	Date of first issue: 01/24/2017

the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

LABEL CODE : 0014

Sources of key data used to compile the Safety Data Sheet : Information taken from reference works and the literature., Information derived from practical experience.

Revision Date : 10/06/2021

This information is given in good faith to the best of our current reasonable knowledge, taking into consideration current status of technology as generally applied in the industry. For updates/more information, visit [www.venatorcorp.com](http://www.venatorcorp.com). NOTHING IN THIS COMMUNICATION IS (OR SHOULD BE TAKEN AS) A WARRANTY (EXPRESS OR IMPLIED). NO REPRESENTATION, ASSURANCE OR UNDERTAKING IS MADE. NO LIABILITY IS OR WILL BE ACCEPTED BY VENATOR IN RELATION TO THE ADEQUACY, ACCURACY, COMPLETENESS, REASONABLENESS OF THIS COMMUNICATION. ALL AND ANY SUCH LIABILITY IS EXPRESSLY DISCLAIMED. IN ALL CASES IT IS YOUR RESPONSIBILITY TO DETERMINE THE APPLICABILITY OF THE INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF THE PRODUCTS DESCRIBED FOR ANY PARTICULAR PURPOSE. Venator products are provided only for manufacturing, processing, formulation, treatment and other such activities. Unless otherwise expressly stated in this document or a valid safety data sheet, Venator products must not be used, resold, distributed, transferred, or otherwise disposed of in (or in each case where intended to be used in) any applications or process in: a) which lead stabilisers/stabilised systems are used where the end product is rigid pvc; b) food; c) cosmetics; d) pharmaceuticals; or e) medical. Nothing in this disclaimer or otherwise limits claims in respect of death or personal injury caused by our negligence. You have full responsibility to use products consistent with safety and technical data sheets. Once a Venator product is within your custody/control, you shall have full responsibility for and liability arising out of its storage, handling, transportation, sale, use, reuse, recycling and/or disposal, and of any derivative product, co-product, by-product or waste product therefrom, including the use of any such product alone or in combination with other substances, and compliance with any laws or regulations relating thereto. This is not: a) a license under any intellectual property right of any entity; or b) a recommendation or authorization to action that infringes any intellectual property right. Unless otherwise agreed in writing and signed by the parties, all sales are subject to the Venator standard terms and conditions of sale. Reference to Venator includes Venator Materials PLC, and any entity that it directly controls, is controlled by, or is under common control with it, and their employees, officers, agents and distributors. All the above applies to this document and anything else made available to you in any form or medium (written or verbal).

The trademarks above are the property of Venator or an affiliate thereof.

© Copyright 2018. Venator Materials PLC. All rights reserved.

TRANSLATION NOTE: This document is a translation of an original Venator communication written in English and is provided for the convenience of the reader. In the event of any discrepancy or ambiguity, the English version will control.