

1. Identification

Product identifier	DMT BYPRODUCTS	
Other means of identification	Not available.	
Synonym(s)	A710 OVHD; DMT RESIDUE; LBR (low boiling residue); LCT OVHD; RCO; T101; Residue Column Overhead; TERATE® 091 RESIDUE; RCO-DMI MIXTURE	
Recommended use	Not available.	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company Information	INVISTA S.à r.l. INVISTA Building 4123 East 37th Street North Wichita, KS 67220	
Emergency telephone:	CHEMTREC: 855-224-6545	
General Information	Product Information: 1-877-446-8478 Outside the U.S.: +1-770-792-4221	
e-mail	msds@invista.com	

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Sensitization, skin	Category 1
OSHA defined hazards	Not classified.	

Label elements



Signal word	Warning	
Hazard statement	May cause an allergic skin reaction.	
Prevention	Avoid breathing dust/fume. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.	
Response	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.	
Storage	Not available.	
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.	
Hazard(s) not otherwise classified (HNOC)	Not classified.	
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
Supplemental information		
Hazard statement	Harmful to aquatic life with long lasting effects. Vapors may form explosive mixtures with air.	
Prevention	Avoid release to the environment.	
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.	

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
1,4-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER, MANUFACTURE OF, BY-PRODUCTS FROM	A710 OVHD; DMT RESIDUE; LBR (low boiling residue); LCT OVHD; RCO; T101; Residue Column Overhead; TERATE® 091 RESIDUE; RCO-DMI MIXTURE	68988-22-7	100 %

4. First-aid measures

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If the affected person is not breathing, apply artificial respiration. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician if symptoms develop or persist.
Skin contact	For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. For minor skin contact, avoid spreading material on unaffected skin. Wash off with soap and water. Remove and isolate contaminated clothing and shoes. Wash clothing separately before reuse. Get medical attention if irritation develops and persists.
Eye contact	Rinse immediately with plenty of water, also under the eyelids. If irritation persists get medical attention.
Ingestion	Have victim rinse mouth thoroughly with water. Never give anything by mouth to a victim who is unconscious or is having convulsions. If swallowed, do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Obtain medical attention, as needed.
Most important symptoms/effects, acute and delayed	Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Skin: May cause allergic skin reaction. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Eyes: May cause eye or skin irritation with susceptible persons. Ingestion of this product may cause nausea, vomiting and diarrhea.
Indication of immediate medical attention and special treatment needed	Symptoms may be delayed. Keep victim warm.
General information	Take off contaminated clothing and shoes immediately. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Dry chemical, CO ₂ , water spray or regular foam.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Irritating and toxic gases or fumes may be released during a fire.
Special protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire-fighting equipment/instructions	Move containers from fire area if you can do it without risk. Water runoff can cause environmental damage.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material. Remove all sources of ignition.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Never return spills to original containers for re-use. Clean up in accordance with all applicable regulations. Keep in suitable, closed containers for disposal.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe gas/fumes/vapor/spray. Avoid contact with skin and eyes.
Take measures to prevent the build up of electrostatic charge.

Follow all SDS/label precautions even after container(s) is/are emptied because they may retain product residue(s).

Conditions for safe storage, including any incompatibilities Keep away from heat and sources of ignition. Store in cool place. Keep the container dry. Keep in a well-ventilated place. Keep container tightly closed.

8. Exposure controls/personal protection

Occupational exposure limits No exposure limits noted for ingredient(s).

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear chemical goggles and face shield. Avoid contact with eyes.

Hand protection Protective gloves. When handling hot material, use heat resistant gloves.

Other Avoid contact with the skin. Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing. Wear eye/face protection.

Respiratory protection Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Avoid contact with the skin and the eyes. Wash hands before breaks and at the end of workday. Keep away from food and drink. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance Not available.

Physical state Liquid.

Form Molten liquid

Color Dark amber.

Odor Ester-like. Sweet.

Odor threshold Not available.

pH 5 - 7

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point > 343.4 °F (> 173 °C)

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) > 1.7 % for diethylene glycol

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density (liquid) Not available.

Solubility(ies) < 0.98 mg/l @ 20°C

Partition coefficient (n-octanol/water) < 5.5 : logPow

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Density 1.25 g/cm³ @ 20°C (Air=1)

10. Stability and reactivity

Reactivity Vapors may form explosive mixture with air. Thermal decomposition can take place above 120 °C.

Chemical stability Stable at normal conditions.

Possibility of hazardous reactions Not expected to occur.

Conditions to avoid Exposure to air or moisture over prolonged periods. Avoid high temperatures.

Incompatible materials Isocyanates. Strong acids, alkalis and oxidizing agents. Reacts with acid anhydrides and acid chlorides.

Hazardous decomposition products Hydrogen chloride gas.

11. Toxicological information

Information on likely routes of exposure

Ingestion Ingestion of this product may cause nausea, vomiting and diarrhea.

Inhalation Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Skin contact May cause an allergic skin reaction. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Eye contact May cause eye irritation with susceptible persons.

Symptoms related to the physical, chemical and toxicological characteristics See information on likely routes of exposure.

Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Product	Species	Test Results
1,4-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER, MANUFACTURE OF, BY-PRODUCTS FROM (CAS 68988-22-7)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory sensitization Due to lack of data the classification is not possible.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Due to lack of data the classification is not possible.

Reproductive toxicity Due to lack of data the classification is not possible.

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure Due to lack of data the classification is not possible.

Aspiration hazard Due to lack of data the classification is not possible.

Further information Symptoms may be delayed.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Product	Species	Test Results
1,4-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER, MANUFACTURE OF, BY-PRODUCTS FROM (CAS 68988-22-7)		
Algae	EC50	> 100 mg/l
Crustacea	EC50	32 - 56 mg/l, 48 hours

Product	Species	Test Results
Aquatic Fish	LC50 Carp (Cyprinus carpio)	> 100 mg/l

Persistence and degradability Not available.

Bioaccumulative potential According to the results of tests of biodegradability this product is not readily biodegradable. Biodegradability = 26.5 % after 28 Days

Partition coefficient n-octanol / water (log Kow)
< 5.5 : logPow

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Dispose in accordance with all applicable regulations. Do not dispose of waste into sewer.

Waste from residues / unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number UN3257

UN proper shipping name ELEVATED TEMPERATURE LIQUID, N.O.S. (1,4-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER, MANUF. OF, BY-PRODUCTS FROM)

Transport hazard class(es) 9

Subsidiary class(es) Not applicable.

Packing group III

Marine pollutant No

IATA

UN proper shipping name FORBIDDEN IF ELEVATED TEMPERATURE

Subsidiary class(es) Not applicable.

Environmental hazards No

IMDG

UN number UN3257

UN proper shipping name ELEVATED TEMPERATURE LIQUID, N.O.S. (1,4-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER, MANUF. OF, BY-PRODUCTS FROM)

Transport hazard class(es) 9

Subsidiary class(es) Not applicable.

Packaging group III

Marine pollutant No

EmS F-A, S-P

General information The transport information above applies to molten shipments (bulk) only. Solid material (as in drum and sample shipments) is not regulated as a hazardous material for shipment.

The shipping requirements need to be determined at the time of shipment based on the specific characteristics of this material.

The listed transportation classification does not address regulatory variations due to changes in packaging, mode of shipment or other regulatory descriptors. The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

DOT; IMDG



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product is listed on the U.S. EPA TSCA Inventory.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical Yes

US state regulations

Product may be subject to reporting in states other than those listed for individual components.

16. Other information, including date of preparation or last revision

Issue date April-14-2015

Revision date 14-Apr-2015

Version # 1.1

Further information Not available.

HMIS® ratings
Health: 1*
Flammability: 1
Physical hazard: 0

NFPA ratings
Health: 1
Flammability: 1
Instability: 0

Disclaimer

This Safety Data Sheet ("SDS") contains selected information about a specific INVISTA product or group of products. It relates only to the identified product and any identified uses and is based on information available as of the date hereof. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. THIS SDS WAS PREPARED PURSUANT TO GOVERNMENT REGULATIONS THAT IDENTIFY SPECIFIC TYPES OF INFORMATION TO BE PROVIDED HEREIN. IT IS THEREFORE NOT INTENDED AS, AND DOES NOT CONTAIN, A COMPLETE STATEMENT OF, AND DOES NOT CONSTITUTE A REPRESENTATION, WARRANTY OR GUARANTY WITH REGARD TO, A PRODUCT'S CHARACTERISTICS, USES, QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR THE SUITABILITY, SAFETY, EFFICACY, HAZARDS OR HEALTH EFFECTS OF THE PRODUCT, WHETHER USED SINGULARLY OR IN COMBINATION WITH ANY OTHER PRODUCT, EXCEPT TO THE EXTENT REQUIRED BY THE RELEVANT LAW AND REGULATIONS. Purchasers and users of the product are responsible for determining that the product is suitable for the intended use and that their workers and the general public are advised of any risks resulting from such use. Nothing contained in this SDS shall be construed to modify any of the commercial terms pursuant to which the product was sold by INVISTA including, but not limited to, terms and conditions addressing each party's respective rights and obligations with regard to warranties, remedies and indemnification.

Purchasers and users of the product specifically should advise all of their employees, agents, contractors and customers who will use the product of the SDS, and any supplementary SDS or written warnings that they may receive from INVISTA from time-to-time. In addition, if purchasers and users believe or have reason to believe that the SDS or other information provided to them by INVISTA is inaccurate or in any way insufficient for any purpose, they should immediately notify INVISTA of the same, and of the basis for their belief (for example, studies, data, reports of incidents, etc.) so that INVISTA can determine whether modification or supplementation of the SDS, or other measures, are appropriate. Failure of purchasers and users to timely provide such notice shall be deemed a waiver by purchasers and users of any and all claims, demands or causes of action, including causes of action based on an alleged failure to warn, for personal injury or damage to the environment or property arising from or attributable to the use of product.

This disclaimer shall be effective to the extent allowed by law. Should any provision be deemed to be ineffective or unenforceable, that provision shall be deemed severed from the disclaimer and the remaining provisions shall continue to have full force and effect.

Revision Information

This document has undergone significant changes and should be reviewed in its entirety.