

SECTION 1: IDENTIFICATION

MANUFACTURED FOR:	YOUNG INNOVATIONS, INC. - DBA DEFEND
ADDRESS:	2260 WENDT STREET
CITY, STATE, ZIP:	ALGONQUIN, IL 60102 USA
TELEPHONE:	1-800-275-0020
PRODUCT ITEM NO.:	CMP-U501, CMP-U502, CMP-U503, CMP-U505, CMP-U507, CMP-U508, CMP-U512, CMP-U524, CMP-U401, CMP-U402, CMP-U403, CMP-U405, CMP-U407, CMP-U408, CMP-U412, CMP-U42
PRODUCT NAME/IDENTIFIER:	NANO-HYBRID UNIVERSAL LC COMPOSITE
COMMON NAME:	N/A
RECOMMENDED USE OF THE CHEMICAL & RESTRICTIONS ON USE:	LIGHT CURING DENTAL FILLING MATERIAL.
24 HR EMERGENCY PHONE #	INFOTRAC 1-800-535-5053 / OUTSIDE U.S. 1-352-323-3500

SECTION 2: HAZARD(S) IDENTIFICATION

THE PREPARATION OF THIS DOCUMENT HAS BEEN CARRIED OUT ACCORDING TO THE U.S. OSHA HAZARD COMMUNICATION STANDARD. THEREFORE, ALL THE KNOWN HAZARDS OF THE PRODUCT OR COMPONENTS HAVE TO BE INCLUDED REGARDLESS THE POTENTIAL RISK.

HAZARD CLASSIFICATION

SERIOUS EYE DAMAGE/IRRITATION: CATEGORY 2B
SKIN SENSITIZER: CATEGORY 1B

LABEL ELEMENTS

SIGNAL WORD: WARNING.
SYMBOLS: EXCLAMATION MARK
PICTOGRAMS



RESTRICTED USE BY DENTAL PROFESSIONAL ONLY.

HAZARD STATEMENT

CAUSES EYE IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.

PRECAUTIONARY STATEMENTS

PREVENTION:
AVOID BREATHING DUST/MIST/VAPOUR/SPRAY.
WEAR PROTECTIVE GLOVES AND PROTECTIVE CLOTHING.
WASH THOROUGHLY AFTER HANDLING.
KEEP IN ORIGINAL CONTAINER ONLY.

RESPONSE:

IF ON SKIN: WASH WITH PLenty OF WATER AND SOAP. IN CASE SKIN IRRITATION OCCURS, SEEK MEDICAL ATTENTION. CONTAMINATED CLOTHING MUST BE WASHED BEFORE REUSE.
IF IN EYES: RINSE WITH CAUTION WITH PLenty OF WATER FOR SEVERAL MINUTES. IN CASE CONTACT LENSES ARE WORN REMOVE AND CONTINUE RINSING. IF EYE IRRITATION PERSISTS SEEK MEDICAL ATTENTION.
DISPOSAL: DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH APPLICABLE LOCAL/REGIONAL/NATIONAL/ INTERNATIONAL REGULATIONS.

SECTION 2: HAZARD(S) IDENTIFICATION (CONT.)

CLASSIFICATION SYSTEM

NFPA RATINGS (SCALE 0 – 4)

HEALTH = 2
FIRE = 1
REACTIVITY = 0

HMIS RATINGS (SCALE 0 – 4)

HEALTH = 2
FIRE = 1
REACTIVITY = 0



HAZARDS NOT OTHERWISE CLASSIFIED

NONE

OTHER HAZARDS

RESULTS OF PBT AND NPNB ASSESSMENT.
PBT: N/A
NPVB: N/A

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL CHARACTERIZATION

MIXTURE OF SUBSTANCES WITH METHACRYLATE ESTER MONOMERS.

C.A.S. NO.	COMPONENT	% WT
109-16-0	DIMETHACRYLATE	2.5 – 10
1565-94-2	DIMETHACRYLATE	2.5 – 10
41637-38-1	DIMETHACRYLATE	2.5 – 10
7631-86-9	AMORPHOUS SILICA CHEMICALLY PREPARED	10 – 20
10287-53-3	PARBENATE	< 1
13463-67-7	TITANIUM DIOXIDE	< 1

SECTION 4: FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

AFTER INHALATION

REMOVE PERSON TO FRESH AIR. GET MEDICAL ATTENTION IF YOU FEEL UNWELL.

AFTER CONTACT WITH SKIN

IMMEDIATELY FLUSH WITH WATER AND THEN WASH WITH SOAP AND WATER. IN CASE SKIN IRRITATION PERSISTS, GET MEDICAL ATTENTION. REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE.

AFTER CONTACT WITH EYES

RINSE, OPENED EYE, WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTACT LENSES, IF POSSIBLE. GET MEDICAL ATTENTION.

AFTER INGESTION

FLUSH MOUTH WITH WATER. GET MEDICAL ATTENTION IMMEDIATELY.

INFORMATION FOR PHYSICIAN

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED: SEE SECTION 11.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED: N/A

SECTION 5: FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: WATER SPRAY, FOAM, CARBON DIOXIDE, DRY CHEMICALS DEPENDING ON THE MATERIALS INVOLVED IN THE FIRE.

EXTINGUISHING MEDIA TO AVOID: NONE.

SPECIAL HAZARDS ARISING FROM COMBUSTION: NO RELEVANT INFORMATION IS AVAILABLE FOR THIS PRODUCT.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS: A SELF-CONTAINED BREATHING APPARATUS.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

VENTILATE AREA. WEAR SAFETY GLASSES, GLOVES AND LAB COAT.

ENVIRONMENTAL PRECAUTIONS

AVOID RELEASE TO THE ENVIRONMENT. DO NOT ALLOW TO ENTER SEWERS OR GROUND WATER.

METHODS FOR CLEANING UP/COLLECTING

COLLECT MECHANICALLY. THE PRODUCT MAY BE ABSORBED BY LIQUID-BINDING MATERIAL (SAND, DIATOMITE, ACID BINDERS). WASH SPILL AREA WITH ALCOHOL OR WATER AND SOAP.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

ADEQUATELY TRAINED PERSONNEL SHOULD HANDLE THIS PRODUCT. DO NOT EAT, DRINK OR SMOKE WHEN USING THE PRODUCT. WASH THOROUGHLY AFTER HANDLING. CONTAMINATED CLOTHING SHOULD NOT BE ALLOWED OUT OF THE WORKPLACE AND IN ANY CASE IT SHOULD BE WASHED BEFORE REUSE. KEEP CONTAINER TIGHTLY CLOSED.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

STORE PRODUCT IN A COOL AND DRY PLACE. KEEP IN ORIGINAL CONTAINER WITH THE CAP ALWAYS TIGHTLY CLOSED. PROTECT FROM EXPOSURE TO LIGHT, HEAT AND DIRECT SUNLIGHT.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

CONTROL PARAMETERS OCCUPATIONAL EXPOSURE LIMITS

IN CASE A COMPONENT IS SHOWN IN SECTION 3 BUT IT DOES NOT APPEAR IN THE TABLE BELOW, THERE ARE NOT ANY AVAILABLE DATA FOR THIS COMPONENT.

C.A.S. NO.	COMPONENT	AGENCY	LIMIT
13463-67-7	TITANIUM DIOXIDE	ACGIH	TWA: 10 MG/M3
13463-67-7	TITANIUM DIOXIDE	OSHA	TWA: 15* MG/M3 *AS TOTAL DUST
13463-67-7	TITANIUM DIOXIDE	CMRG	TWA: 5* MG/M3 *AS RESPIRABLE DUST

ACGIH: AMERICAN CONFERENCE OF GOVERNMENT INDUSTRIAL HYGIENISTS

OSHA: UNITED STATES DEPARTMENT OF LABOUR – OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

TWA: TIME-WEIGHTED-AVERAGE

EXPOSURE CONTROL

PERSONAL PROTECTIVE EQUIPMENT (PPE)

VENTILATION: ENSURE ADEQUATE VENTILATION OF THE PREMISES WHERE THE PRODUCT IS STORED AND/OR HANDLED.

RESPIRATORY PROTECTION: NOT REQUIRED.

HAND PROTECTION: SUITABLE PROTECTIVE GLOVES SHOULD BE WORN.

EYE PROTECTION: SAFETY GLASSES SHOULD BE WORN.

SKIN PROTECTION: DO NOT EAT, DRINK OR SMOKE WHEN USING THE PRODUCT.

OTHER: LAB COAT IS SUGGESTED WHEN USING THE PRODUCT.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE:	LIQUID
COLOUR:	OFF-WHITE
ODOUR:	CHARACTERISTIC
ODOUR THRESHOLD:	N/A
PH VALUE	N/A
MELTING POINT:	N/A
BOILING POINT:	N/A
FLASH POINT:	N/A
EVAPORATION RATE:	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS):	N/A
DENSITY:	APPROXIMATELY 1,3 G/CM3
VAPOUR PRESSURE:	N/A
VAPOUR DENSITY:	N/A
VISCOSITY:	NOT DETERMINED
SOLUBILITY:	INSOLUBLE
UTO IGNITION:	PRODUCT IS NOT SELF IGNITING
BOILING POINT:	N/A
VISCOSITY:	NO DATA AVAILABLE

SECTION 10: STABILITY AND REACTIVITY**REACTIVITY**

THE PRODUCT IS CONSIDERED TO BE NON REACTIVE UNDER NORMAL USE CONDITIONS.

CHEMICAL STABILITY

STABLE UNDER NORMAL STORAGE AND HANDLE CONDITIONS.

HAZARDOUS DECOMPOSITION PRODUCTS

NONE, IF USED IN ACCORDANCE WITH INSTRUCTIONS.

CONDITIONS AND/OR MATERIALS TO AVOID

AVOID STORING THE PRODUCT AT EXTREME TEMPERATURES (>27 °C AND <5 °C) AND DIRECT SUNLIGHT. AVOID REDUCING AND OXIDIZING AGENTS, PEROXIDES AND AMINES.

POSSIBILITY OF HAZARDOUS REACTIONS

HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

SECTION 11: TOXICOLOGICAL INFORMATION

IT IS REQUIRED BY THE U.S. OSHA HAZARD COMMUNICATION STANDARD TO INCLUDE ALL THE KNOWN HAZARDS OF THE PRODUCT OR COMPONENTS INCLUDED REGARDLESS THE POTENTIAL RISK.

THE RISKS OF THE HAZARDS COMMUNICATED IN THIS DOCUMENT MAY VARY DEPENDING ON THE POTENTIAL OF EXPOSURE.

SECTION 11: TOXICOLOGICAL INFORMATION (CONT.)
INFORMATION ON TOXICOLOGICAL EFFECTS

INHALATION: NOT EXPECTED TO BE AN INHALATION HAZARD DESPITE THE CHARACTERISTIC ODOUR THAT IT MAY HAVE.

SKIN CONTACT: MILD SKIN IRRITATION. SIGNS/SYMPTOMS MAY INCLUDE LOCALIZED REDNESS, SWELLING, ITCHING, AND DRYNESS. ALLERGIC SKIN REACTION. SIGNS/SYMPTOMS MAY INCLUDE REDNESS, SWELLING, BLISTERING, AND ITCHING.

EYE CONTACT: MODERATE EYE IRRITATION. SIGNS/SYMPTOMS MAY INCLUDE REDNESS, SWELLING, PAIN, TEARING, AND BLURRED OR HAZY VISION.

INGESTION: GASTROINTESTINAL IRRITATION. SIGNS/SYMPTOMS MAY INCLUDE ABDOMINAL PAIN, STOMACH UPSET, NAUSEA, VOMITING AND DIARRHEA.

ADDITIONAL TOXICOLOGICAL INFORMATION

CARCINOGENICITY: DURING NORMAL / INTENDED USE IT IS NOT EXPECTED TO CAUSE THE FOLLOWING HEALTH EFFECT(S) DURING EXPOSURE.

C.A.S. NO.	COMPONENT	CLASS	REGULATION
7631-86-9	AMORPHOUS SILICA CHEMICALLY PREPARED	3	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
13463-67-7	TITANIUM DIOXIDE	2B	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

TOXICOLOGICAL DATA: IN CASE A COMPONENT IS SHOWN IN SECTION 3 BUT IT DOES NOT APPEAR IN THE TABLE BELOW, EITHER THERE ARE NOT ANY AVAILABLE DATA FOR THIS COMPONENT OR THE DATA ARE INSUFFICIENT FOR CLASSIFICATION.

ACUTE TOXICITY

COMPONENT	ROUTE	SPECIES	VALUE
DIMETHACRYLATE	DERMAL	PROFESSIONAL JUDGEMENT	LD50 ESTIMATED > 5,000 MG/KG
	INGESTION	RAT	LD50 > 10,837 MG/KG
DIMETHACRYLATE	INGESTION		LD50 ESTIMATED 2,000 – 5,000 MG/KG
	DERMAL	PROFESSIONAL JUDGEMENT	LD50 ESTIMATED 2,000 – 5,000 MG/KG
DIMETHACRYLATE	DERMAL	PROFESSIONAL JUDGEMENT	LD50 > 5,000 MG/KG
	INGESTION	RAT	LD50 > 2,000 MG/KG
PARBENATE	DERMAL	RAT	LD50 > 2,000 MG/KG
	INGESTION	RAT	LD50 > 2,000 MG/KG
TITANIUM DIOXIDE	DERMAL	RABBIT	LD50 > 10,000 MG/KG
	INHALATION-	RAT	LD50 > 6.82 MG/L
	DUST/MIST (4HOURS)		
	INGESTION	RAT	LD50 > 10,000 MG/KG

SKIN CORROSION/IRRITATION

COMPONENT	SPECIES	VALUE
DIMETHACRYLATE	GUINEA PIG	MILD IRRITATION
DIMETHACRYLATE		MINIMAL IRRITATION
PARBENATE	RABBIT	NOT SIGNIFICANT IRRITATION
TITANIUM DIOXIDE	RABBIT	NOT SIGNIFICANT IRRITATION

SECTION 11: TOXICOLOGICAL INFORMATION (CONT.)
SERIOUS EYE DAMAGE/IRRITATION

COMPONENT	SPECIES	VALUE
DIMETHACRYLATE	PROFESSIONAL JUDGMENT	MODERATE IRRITATION
DIMETHACRYLATE		MODERATE IRRITATION
PARBENATE	RABBIT	MILD IRRITATION
TITANIUM DIOXIDE	RABBIT	NOT SIGNIFICANT IRRITATION

SKIN SENSITIZATION

COMPONENT	SPECIES	VALUE
DIMETHACRYLATE	HUMAN AND ANIMAL	SENSITIZING
DIMETHACRYLATE	GUINEA PIG	SENSITIZING
DIMETHACRYLATE	GUINEA PIG	NOT SENSITIZING
TITANIUM DIOXIDE	HUMAN AND ANIMAL	NOT SENSITIZING

RESPIRATORY SENSITIZATION:
GERM CELL MUTAGENICITY

COMPONENT	ROUTE	VALUE
DIMETHACRYLATE	IN VITRO	SOME POSITIVE DATA EXIST BUT THERE ARE INSUFFICIENT FOR CLASSIFICATION
DIMETHACRYLATE	IN VITRO	SOME POSITIVE DATA EXIST BUT THERE ARE INSUFFICIENT FOR CLASSIFICATION
DIMETHACRYLATE	IN VITRO	NOT MUTAGENIC
TITANIUM DIOXIDE	IN VITRO	NOT MUTAGENIC
	IN VIVO	NOT MUTAGENIC

CARCINOGENICITY

IN CASE A COMPONENT IS SHOWN IN SECTION 3 BUT IT DOES NOT APPEAR IN THE TABLE BELOW, EITHER THERE ARE NOT ANY AVAILABLE DATA FOR THIS COMPONENT OR THE DATA ARE INSUFFICIENT FOR CLASSIFICATION.

COMPONENT	ROUTE	SPECIES	VALUE
DIMETHACRYLATE	DERMAL	MOUSE	NOT CARCINOGENIC
AMORPHOUS SIL-ICA CHEMICALLY PREPARED			SOME POSITIVE DATA EXIST BUT THERE ARE INSUFFICIENT FOR CLASSIFICATION
TITANIUM DIOXIDE	INGESTION	MULTIPLE ANIMAL SPECIES	NOT CARCINOGENIC
	INHALATION	RAT	CARCINOGENIC

REPRODUCED TOXICITY: IN CASE A COMPONENT IS SHOWN IN SECTION 3 BUT IT DOES NOT APPEAR IN THE TABLE BELOW, EITHER THERE ARE NOT ANY AVAILABLE DATA FOR THIS COMPONENT OR THE DATA ARE INSUFFICIENT FOR CLASSIFICATION.

SECTION 11: TOXICOLOGICAL INFORMATION (CONT.)
REPRODUCED AND/OR DEVELOPMENT EFFECTS

COMPONENT	ROUTE	VALUE	SPECIES	TEST RESULT	EXPOSURE DURATION
DIMETHACRYLATE	INGESTION	NOT TOXIC TO FEMALE REPRODUCTION	MOUSE	NOAEL 1 MG/KG/D	1 GENERATION
DIMETHACRYLATE	INGESTION	NOT TOXIC TO MALE REPRODUCTION	MOUSE	NOAEL 1 MG/KG/D	1 GENERATION
DIMETHACRYLATE	INGESTION	NOT TOXIC TO DEVELOPMENT	MOUSE	NOAEL 1 MG/KG/D	1 GENERATION
DIMETHACRYLATE	INGESTION	NOT TOXIC TO FEMALE REPRODUCTION	MOUSE	NOAEL 0.8 MG/KG/D	PREMATING & DURING GESTATION
DIMETHACRYLATE	INGESTION	NOT TOXIC TO MALE REPRODUCTION	MOUSE	NOAEL 0.8 MG/KG/D	PREMATING & DURING GESTATION
DIMETHACRYLATE	INGESTION	NOT TOXIC TO DEVELOPMENT	MOUSE	NOAEL 0.8 MG/KG/D	PREMATING & DURING GESTATION

TARGET ORGAN(S): IN CASE A COMPONENT IS SHOWN IN SECTION 3 BUT IT DOES NOT APPEAR IN THE TABLE BELOW, EITHER THERE ARE NOT ANY AVAILABLE DATA FOR THIS COMPONENT OR THE DATA ARE INSUFFICIENT FOR CLASSIFICATION.

SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE: IN CASE A COMPONENT IS SHOWN IN SECTION 3 BUT IT DOES NOT APPEAR IN THE TABLE BELOW, EITHER THERE ARE NOT ANY AVAILABLE DATA FOR THIS COMPONENT OR THE DATA ARE INSUFFICIENT FOR CLASSIFICATION.

SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE: IN CASE A COMPONENT IS SHOWN IN SECTION 3 BUT IT DOES NOT APPEAR HERE, THERE ARE NOT ANY AVAILABLE DATA FOR THIS COMPONENT.

COMPONENT	ROUTE	TARGET ORGAN(S)	VALUE	SPECIES	TEST RESULT	EXPOSURE DURATION
DIMETHACRYLATE	DERMAL	KIDNEY AND/OR BLADDER	SOME POSITIVE DATA EXIST BUT THERE ARE INSUFFICIENT FOR CLASSIFICATION	MOUSE	NOAEL 833 MG/KG/D	78 WEEKS
DIMETHACRYLATE	DERMAL	BLOOD	ALL DATA ARE NEGATIVE	MOUSE	NOAEL 833 MG/KG/D	78 WEEKS
DIMETHACRYLATE		ENDOCRINE SYSTEM, LIVER, NERVOUS SYSTEM, KIDNEY AND/OR BLADDER	ALL DATA ARE NEGATIVE	MOUSE	NOAEL 0.8 MG/KG/D	PREMATING & DURING GESTATION

ASPIRATION HAZARD: IN CASE A COMPONENT IS SHOWN IN SECTION 3 BUT IT DOES NOT APPEAR HERE, THERE ARE NOT ANY AVAILABLE DATA FOR THIS COMPONENT.

SECTION 12: ECOLOGICAL INFORMATION

IF MATERIAL IS PROPERLY USED AND HANDLED NO ECOLOGICAL PROBLEMS ARE TO BE ANTICIPATED.

DO NOT DISCARD MATERIAL INTO DRAINS/SEWERS OR AQUATIC ENVIRONMENT AS IT MAY CAUSE PH VARIATIONS.

SECTION 13: DISPOSAL CONSIDERATIONS

POLYMERIZE PRIOR DISPOSAL. DISPOSAL MUST BE CARRIED OUT IN ACCORDANCE TO THE LOCAL AND NATIONAL REGULATIONS CURRENTLY IN FORCE.

SECTION 14: TRANSPORT INFORMATION

UN-NUMBER DOT, ADR, ADN, IMDG, IATA	NONE
UN PROPER SHIPPING NAME DOT, ADR, ADN, IMDG, IATA	NONE
TRANSPORT HAZARD CLASS DOT, ADR, ADN, IMDG, IATA	NONE
PACKING GROUP DOT, ADR, IMDG, IATA	NONE
PACKING GROUP	

SECTION 15: REGULATORY INFORMATION

THE PRODUCT IS A MEDICAL DEVICE ACCORDING TO EC DIRECTIVE 93/42/EEC.

THIS PRODUCT IS CLASSIFIED AS A MEDICAL DEVICE UNDER US REGULATIONS AND IT HAS BEEN REVIEWED BY THE US FOOD AND DRUG ADMINISTRATION (FDA).

SECTION 16: ADDITIONAL INFORMATION
CAUTION: PRODUCT FOR PROFESSIONAL USE ONLY

THE INFORMATION PROVIDED ABOVE IS BASED ON OUR PRESENT KNOWLEDGE AND EXPERIENCE. THIS SAFETY DATA SHEET REFERS EXPLICITLY TO THE PRODUCT INDICATED AND COMPRISES NO GUARANTEE OF PARTICULAR QUALITY. ANY USE OF THIS PRODUCT IN ANY WAY NOT INDICATED ON THIS SAFETY DATA SHEET WILL BE EXCLUSIVELY UNDER THE USER'S RESPONSIBILITY.

ISSUE DATE: 10/04/2023

SUPERSEDES SDS: N/A