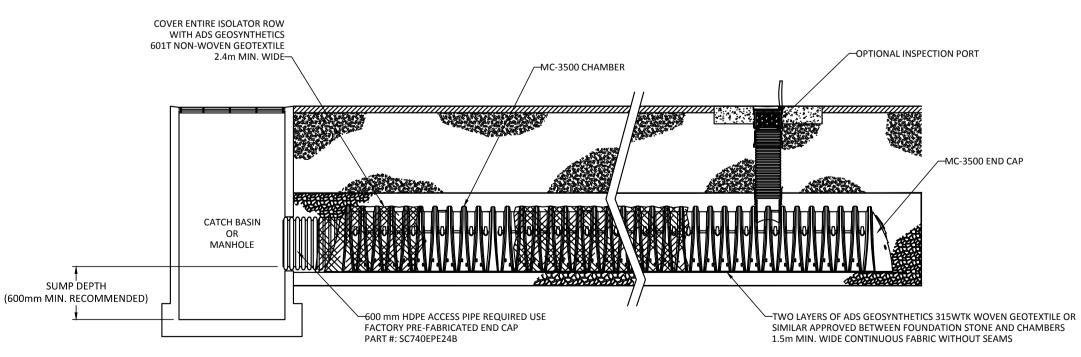


ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE ALL AROUND CLEAN, CRUSHED, ANGULAR STONE IN A & B LAYERS_ PAVEMENT LAYER (DESIGNED BY *********** PERIMETER STONE O BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE (SEE NOTE 6 RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 600mm EXCAVATION WAL (CAN BE SLOPED OR VERTICAL) SUBGRADE SOILS /

NOTES:

- 1. MC-3500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCÉ WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT 5. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- 6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 7. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



MC-3500 ISOLATOR ROW DETAIL

INSERTA TEE DETAIL ⊢NSERTA-TEE AT CHAMBER JOINTS CONVEYANCE PIPE MATERIAL MAY VARY (PVC, HDPE, ETC.) INSERTA TEE CONNECTION INSERTA TEE TO BE INSTALLED, CENTERED OVER CORRUGATION PLACE ADS GEOSYNTHETICS 315 WOVEN GEOTEXTILE OR SIMILAR APPROVED (CENTERED SECTION A-A SIDE VIEW ON INSERTA-TEE INLET) OVER BEDDING STONE FOR SCOUR PROTECTION AT SIDE INLET CONNECTIONS. GEOTEXTILE MUST EXTEND HEIGHT FROM BASE OF MAX DIAMETER OF 150mm PAST CHAMBER FOOT INSERTA TEE SC-310 150mm 100mm 100mm DC-780 250mm 100mm MC-3500 300mm 150mm 300mm 200mm PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS.

CONCRETE COLLAR-

CONCRETE SLAB

200mm MIN. THICKNESS

FLEXSTORM CATCH IT—

150mm INSERTA TEE-

CORRUGATION CREST

PART#06N12ST74IP

WITH USE OF OPEN GRATE

INSERTA TEE TO BE CENTERED ON

CONTACT STORMTECH FOR MORE INFORMATION.

PART# 6212NYFX

PAVEMENT

UNDERDRAIN DETAIL END CAP -OUTLET MANIFOLD **FOUNDATION STONE** BENEATH CHAMBERS 120g NEEDLE PUNCHED FILTER GEOTEXTILE TO SECTION A-A EN965 AROUND BASE AND DUAL WALL SIDES OF EXCAVATION-_PERFORATED UNDERDRAIN FOUNDATION STONE BENEATH CHAMBERS 120g NEEDLE PUNCHE NUMBER AND SIZE OF UNDERDRAINS PER SITE DESIGN ENGINEER FILTER GEOTEXTILE TO 100 mm TYP FOR SC-310 SYSTEMS EN965 AROUND BASE AND SECTION B-B 150 mm TYP FOR MC-3500, DC-780, MC-3500 & MC-4500 SYSTEMS

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
С	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	OR	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAY LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
В	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
Α	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2 3}

PLEASE NOTE: THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED,

STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION

EQUIPMENT, FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.

-CONCRETE COLLAR NOT REQUIRED FOR

300mm NYLOPLAST INLINE DRAIN

BODY W/SOLID HINGED COVER OR

UNPAVED APPLICATIONS

PART# 2712AG06N

GRATE: 1299CGS

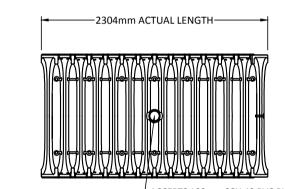
-150 mm ADS N-12

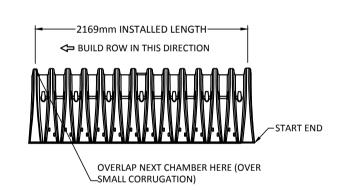
-MC-3500 CHAMBER

INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS

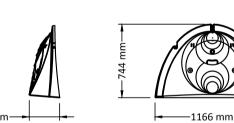
GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON

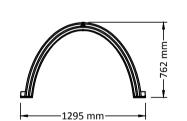
MC-3500 TECHNICAL SPECIFICATION





ACCEPTS 100mm SCH 40 PVC PIPE FOR INSPECTION PORT LFOR PIPE SIZES LARGER THAN 100mmUP TO 250mm USE INSERTA TEE CONNECTION CENTERED ON A CHAMBER CREST CORRUGATION





NOMINAL CHAMBER SPECIFICATIONS SIZE (W X H X INSTALLED LEN CHAMBER STORAGE MINIMUM INSTALLED STORAGE

1295mm X 762mm X 2169mm 33.6kg

152mm STONE ABOVE, BELOW, AND BETWEEN CHAMBERS ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH * FOR THE SC740EPE24B THE 600mm STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 44mm. BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"

STUBS AT TOP OF END CAP FOR PART NU	JMBERS ENDING WI	TH "T"		
PART #	STUB	Α	В	С
SC740EPE06T / SC740EPE06TPC	150mm 277mm	277mm	470mm	
SC740EPE06B / SC740EPE06BPC				13mm
SC740EPE08T /SC740EPE08TPC	200mm	310mm	419mm	
SC740EPE08B / SC740EPE08BPC		31011111		15mm
SC740EPE10T / SC740EPE10TPC	250mm	340mm	368mm	
SC740EPE10B / SC740EPE10BPC				18mm
SC740EPE12T / SC740EPE12TPC	300mm 373mm	318mm		
SC740EPE12B / SC740EPE12BPC	300111111	37311111		30mm
SC740EPE15T / SC740EPE15TPC	375mm 467mm	467mm	229mm	
SC740EPE15B / SC740EPE15BPC		467111111		33mm
SC740EPE18T / SC740EPE18TPC	450mm	1500 mm	127mm	
SC740EPE18B / SC740EPE18BPC		1500 11111		41mm
SC740EPE24B*	600mm	470mm		3mm

STORMTECH CHAMBER SPECIFICATIONS

- 1. CHAMBERS SHALL BE STORMTECH MC-3500, SC-310, OR APPROVED EQUAL 2. CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR
- 3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT
- 4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE
- INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- 5. CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".^J
- 6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 7. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
- a. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM
 - F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS,

MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED

STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.

AS PART OF THE AASHTO STRUCTURAL EVALUATION

SECTION 12.12. ARE MET. THE 50 YEAR CREEP

8. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310 / MC-3500 SYSTEM

- STORMTECH SC-310 & MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- 2. STORMTECH SC-310 & MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310 / MC-3500 / SC-780
- CONSTRUCTION GUIDE" 3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR
- SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL STONESHOOTER LOCATED OFF THE CHAMBER BED.
- BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
- BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO
- PLACING CHAMBERS. 5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE
- MAINTAIN MINIMUM 150mm SPACING BETWEEN THE CHAMBER ROWS. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 20-50mm
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN
- ENGINEER. 9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING
- CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- ACCORDANCE WITH THE "STORMTECH SC-310 / MC-3500 / DC-780 CONSTRUCTION GUIDE". 2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & MC-3500 CHAMBERS
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS. NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE
 - ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310 / MC-3500 / DC-780 CONSTRUCTION
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/MC-3500/DC-780 CONSTRUCTION GUIDE".
- 3. FULL 900mm OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF

INSPECTION & MAINTENANCE

INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS

STEP 1 INSPECT ISOLATOR ROW FOR SEDIMENT A. INSPECTION PORTS (IF PRESENT)

- A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
- A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
- A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL) A.5. IF SEDIMENT IS AT, OR ABOVE, 80mm PROCEED TO STEP 2. IF NOT,
- PROCEED TO STEP 3. B. ALL ISOLATOR ROWS B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR
- B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH
- OUTLET PIPE i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A
- CONFINED SPACE ENTRY ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF
- B.1. IF SEDIMENT IS AT, OR ABOVE, 80mm PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2 CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS

ENTERING MANHOLE

A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 1.1m OR

APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN C. VACUUM STRUCTURE SUMP AS REQUIRED

REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND

STEP 4 INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH

Crekav Trading GP Limited.

St. Paul's Residential Development.

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NOTES	Rev. No. Date REVISION NOTE	Drn. By Chkd. By Rev. No. Date REVISION NOTE	
<u>NOTES</u>	P1 14/08/2017 ISSUED FOR PLANNING	JB AL	'
	P2 15/12/2017 ISSUED FOR PLANNING	JS JB	
For setting out refer to Engineer's drawings. This drawing to be read in conjunction with all other Engineering drawings and all other relevant drawings and Specifications.	P3 20/12/2017 ISSUED FOR PLANNING	AF AH	
other relevant drawings and Specifications.	P4 23/05/2019 ISSUED FOR PLANNING	AF JB	- 1 '
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Proposed Attenuation Details

AS SHOWN

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